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VIA FEDERAL EXPRESS

Mr. Lance Richman U.S. Environmental Protection Agency North New Jersey, Section 2 26 Federal Plaza Suite 13-100 New York, New York 10278

Re: Alliance Chemical Inc.

Dear Lance:

2300 FIRST CITY TOWER 1001 FANNIN

HOUSTON, TEXAS 77002-6760

FAX (713) 758-2346

16 ALEXEY TOLSTOY STREET

SECOND FLOOR MOSCOW 103001, RUSSIAN FEDERATION

TELEPHONE OII (70-95) 956-1995

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FAX OII (70-95) 956-1996

As I have discussed with Patricia Hick, enclosed please find a memorandum commenting on the response of Alliance Chemical Inc. to the EPA's request for information under Section 104(e) of the Comprehensive Environmental Response, Compensation, and Liability Act. The memorandum is accompanied by a number of documents, indexed and bound for your ready reference. These documents include an opinion concerning the hazardous substances in Alliance Chemical Inc.'s waste streams, as well as documents Maxus has collected from public sources.

Please do not hesitate to contact me if you or any members of your team have questions or comments. We look forward to working with you.

Amanda G. Birrell

ery truly yours,

0695:2312 Enclosures

cc: Ms. Patricia C. Hick Gerald R. Connolly

MEMORANDUM

December 5, 1994

TO:

Lance Richman

FROM:

Maxus Energy Corporation, Responding on Behalf of Occidental Chemical

Corporation

RE:

Alliance Chemical Inc.

Purpose and Scope:

This memorandum analyzes the response of Alliance Chemical Inc. ("Response") to the Request for Information dated January 27, 1994 in view of the records submitted with the Response and the information Maxus has collected. We have already discussed many of these ideas informally with Gerry Connolly.

Status of the Liability Claim:

Without resolving the factual issues raised by the Response, Alliance has already admitted that it generated hazardous substances that were released to the Passaic River. Therefore, Alliance is a party potentially responsible for costs associated with the Passaic River.

Specifically, Alliance either admits or can be charged with:

- 1. Alliance generated 2,3,7,8-TCDD and other hazardous substances in its process effluent from the processes described in the Response. The dioxin was a byproduct of the first step in Alliance's manufacture of 5-chloro-2,4-dimethoxyaniline, the alkaline hydrolysis of 5-nitro-1,2,4-trichlorobenzene in sodium hydroxide and methanol. See Letter from Steve Huntley, attached as Exhibit A.
- 2. Alliance's process effluent was discharged to the Passaic River. All of the company's effluent was discharged to the River through Plum Creek until 1970 when the Alliance facility was connected to the PVSC. Response at 8-9. When Alliance was connected to the PVSC, the facility's effluent was carried in the Roanoke Avenue CSO district. Response at 8. See Maps of the Alliance facility and Roanoke Avenue CSO District attached as Exhibit B. This district bypassed'

untreated effluent, including Alliance's untreated effluent, to the Passaic with every significant rainfall. See Report on Industrial Waste Streams Bypassed to the Passaic River.

- 3. The process effluent discharged to Plum Creek and the PVSC either contained hazardous substances or was characteristically hazardous.
 - a. The chemical manufacturing processes described in the Response generated 2,3,7,8-TCDD and other hazardous substances. These substances, including 2,3,7,8-TCDD, would have been carried with effluent through the filters, if any, employed at the plant. See letter from Steve Huntley, attached as Exhibit A.
 - b. Alliance was cited by the PVSC as early as 1948 for discharging a "yellow colored clear liquid" to Plum Creek. Copies of the relevant documentation are attached as Exhibit C.
 - c. As early as January 1966, Alliance was cited by the Army Corps of Engineers for discharging strong acid to Plum Creek. In February 1966, inspectors found red acid draining from Alliance's holding ponds to Plum Creek and the Passaic River. Although a letter from Alliance in March of 1966 claimed that Alliance had solved the problem, in August of 1968, Charles Motta, the plant's Production Manager, wrote a frank memo reciting that Alliance continued to drain red acidic process waste into Plum Creek. Mr. Motta states candidly: "Our present method of handling our acidic waste is inadequate and would not serve as a convincing method of neutralization of plant waste water." Alliance's test results in 1969 record a Ph of 1 in the Creek; and tests of its plant effluent show similar results. Copies of the relevant documentation are attached as Exhibit D.
 - d. In 1969, the Passaic Valley Sewerage Commission found Alliance's effluent to be explosive. Internal memos from Alliance admit that the effluent contained xylol (also known as xylene), a listed hazardous substance. These records are attached as Exhibit E.
 - e. Documents produced in the Response or collected by Maxus show or imply that Alliance's process effluent either contained hazardous substances or was characteristically hazardous:

1972 Effluent sample test results:
Total volatile solids 4,164 mg/l
Volatile suspended solids 475 mg/l
Oil & Grease 406 mg/l
Chlorides 5,150 mg/l
TOC 1,193 mg/l
Zn 500 mg/l

1977 Effluent discharged to the PVSC is described by Alliance as an irritant, corrosive and toxic

1979 Effluent had pH of 1

1980 Effluent discharged to the PVSC then contained:

1,2,4-Trichlorobenzene Copper Zinc 50 lbs per year¹ 100 lbs per year 130,000 lbs per year

These documents are attached as Exhibit F.

- f. In addition, Alliance's facility itself is severely contaminated with PCBs, solvents and other hazardous substances. Alliance's own documents record the frequent severe flooding of the property which could have operated as an additional mechanism for discharge of hazardous substances to the Passaic River. A representative sample of these documents is attached as Exhibit G.
- 4. Plum Creek discharges to the Passaic River approximately 1300 feet below the bottom of the Study Area. The Roanoke Avenue CSO district which served the Alliance facility discharges approximately 1600 feet above the border of the Six Mile Study Area. Therefore, after 1970, when Alliance was connected to the PVSC's sewerage system, its effluent was discharged directly to the Study Area.

Other Issues:

As EPA continues its inquiries concerning Alliance, it might elect to pursue the following leads or avenues of inquiry:

1. The Response claims that neither 2-chloro-1,4-diethoxy-5-nitro benzene nor 5-chloro-2,4-dimethoxyaniline are hazardous substances within the meaning of

The NJDEP Selected Substance Report we obtained from the NJDEP Division of Site Assessment office in Robbinsville, New Jersey, indicate this volume in handwritten notes on a typed form. We have included this Form in Exhibit F. The Response contained a copy of only the unedited Form.

- CERCLA. Response at 3. This statement is incorrect. Both substances are chlorinated benzenes. The list of hazardous substances includes all chlorinated benzenes. See 40 C.F.R. Table 304. In addition, both these materials are Class II dioxin precursors.
- 2. The Response inadequately describes the processes used at the Alliance facility, as well as the raw materials handling and waste disposal practices. For example, according to the documents Alliance produced, xylol (along with several flammable materials) was used on Site. There is no description of a manufacturing process using xylol. A New Jersey Community Right to Know Survey of Alliance's facility in 1988, attached as Exhibit G, lists seventeen pages of chemicals present at the facility, but the Response does not describe how each of these chemicals were used. The Response is similarly silent on the handling of 1,2,4-trichlorobenzene. According to the NJDEP's Selected Substance Report, Alliance was using 38,350 lbs per year of this Class II dioxin precursor at the Site, but the Response does not mention how it was stored or handled.
- 3. Similarly, the Response's description of the hazardous substances contained in the effluent is incomplete. For example, clearly Alliance knew that it was discharging 1,2,4-trichlorobenzene, but it neglected to include that substance in its response to question 7a. The Response's cagey statement "There may be some hazardous substances generated as by-products which are unknown . . ." (Response at 10) is not a sufficient answer. Alliance is obligated to identify those hazardous substances it knows to have been in its waste stream.
- 4. The Response also refuses to supply information "on behalf of any predecessor corporations" (Response at 1), and therefore gives no information about operations at the Site before 1965. However, according to the Response, Pfister acquired Alliance in a stock purchase in 1965. Pfister is therefore liable for Alliance's and Alliance's predecessors' actions at the facility before Pfister acquired the stock. Publicly available documents obtained by Maxus indicate that Alliance was operating at the Avenue P location starting in 1945. Before this date, several companies, including the Martin Chemical Company (now Martin Marietta Company), American Cyanamid, Calco Chemical Company and Amalgamated Dyestuff and Chemical Works, Inc. operated at the facility. Pfister should be required to obtain and supply EPA information about Site activities before 1965.
- 5. The Response does not adequately describe the history of the use or repair of the lagoon or pond. The Response states simply that the unlined lagoon existed from 1965 to 1979, and that process effluent was discharged to a drainage ditch from 1965 to 1970. Aerial photographs show this unlined trench and lagoon to exist at least as early as 1953. As noted earlier, process wastes in the form of a "yellow colored clear liquid" were being discharged to Plum Creek via a

drainage ditch as early as 1948. A copy of the analysis of the aerial photographs is attached as Exhibit I.

Hazardous substances, including dioxin precursor compounds, have been found in site soils and sediments in locations including the former unlined trenches and lagoon. Sampling conducted by the NJDEP in 1989 detected concentrations of 2,4,5-trichlorophenol and 2,4-dichlorophenol, both Class I dioxin precursors and 1,2,4-trichlorobenzene, a Class III dioxin precursor at five foot depths in the areas of the old lagoon and trench.² A copy of the NJDEP Report of its investigation and the summary of sampling data is attached as Exhibit J.

6. The Response established that hazardous substances from Alliance my be leaching into the waterway from sources other than its own facility. The Response states that Alliance retained D&J Trucking exclusively to haul Alliance's solid waste away from the facility. D&J Trucking operated and disposed of waste at two landfills located on Avenue P in Newark that abutted Plum Creek. In 1977, D&J Trucking was charged with illegally dumping liquid waste into open pits at the 310 Avenue P Site. The liquid waste dumped was observed entering Plum Creek. During interim remedial action at the Avenue P Landfill in 1985, more than 1400 drums were found buried and over 300 drums were removed from Plum Creek. During remediation, samples were collected of soil and surface water in Plum Creek. Analysis indicates that similar compounds that were present in Alliance waste streams were also found in the soil and surface water at the landfill, including PCBs, metals and volatile organics.

Recommended Actions:

- 1. EPA should notify Alliance that it is a party potentially responsible for costs associated with the Six Mile Study Area.
- 2. Additionally and alternatively, EPA could send a second 104(e) which elicits both a more accurate description of the generation of hazardous substances at the facility; and a description of waste or effluent treatment practices at the facility before 1965. Specifically, EPA should elicit a description of every process

No subsurface samples collected in the former lagoon and trench area have been tested for dioxin, even though these samples show significant quantities of dioxin precursor chemicals. As process wastewater was reportedly discharged to Plum Creek via this lagoon and trench, the former bottom sediments in this area may contain detectable quantities of 2,3,7,8-TCDD formerly discharged via this mechanism. Sampling conducted for NJDEP in 1985 at other locations at the facility specifically for 2,3,7,8-TCDD revealed no detectable concentrations. However, the sampling report prepared by EC Jordan indicates that the two subsurface samples planned for the former lagoon and trench area were never taken as attempts to dig through the debris used as fill proved futile.

used on Site, and perhaps might reference the extensive list of chemicals known to have been on Site but unaccounted for by the process descriptions previously supplied. For every process used at the Site, Alliance should be requested to supply a description of the equipment used, the volume, nature and transportation (by tubing, piping, etc.) of materials used, as well as a diagram of the locations in the plant where the processes occurred. Alliance should be required to describe the parity of the raw materials used, the length of time the reactions were allowed to run, the temperature of the reactions, and the purity of the final product. Alliance should specifically indicate where and how raw materials and product were stored. Finally, but perhaps most important, Alliance should be pressed to give a complete and accurate description of all hazardous substances in its plant effluent, whether or not Alliance thinks that the effluent drained to the Passaic River.

- 3. EPA should notify Alliance that it intends to pursue interviews of its employees, and should pursue them. Maxus has provided EPA with information concerning several employees and would be happy to assist EPA in any additional manner requested.
- 4. EPA should ascertain the current status of the Site. The Response suggests that Alliance has reached an agreement with the State of New Jersey for the remediation of its dioxin contaminated facility. This agreement, together with any information concerning the remediation program, may provide additional insights into the migration of materials from Alliance's facility into the Passaic River.

0695:2312 Attachments

cc: Patricia C. Hick Gerald R. Connolly

Alliance Chemical Inc. Documents and Comments Concerning CERCLA 104(e) Response

Submitted by
Maxus Energy Corporation
Responding on behalf of
Occidental Chemical Corporation

December 5, 1994

INDEX OF DOCUMENTS IN SUPPORT OF COMMENTS REGARDING CERCLA 104(E) RESPONSE OF ALLIANCE CHEMICAL INC.

TAB A Letter from Steve Huntley

TAB B Maps of the Alliance Facility and the Roanoke Avenue CSO District

MAP 1: Location map illustrating the location of the facility and the pathway of effluent to the Passaic River.

MAP 2: August 23, 1988 map showing routing of process wastewater from the Alliance facility down the sewer line on McGregor Avenue to the sewer line on Avenue P. This map was obtained from the PVSC.

MAP 3: City of Newark Department of Engineering maps showing that the Avenue P sewer flows north to the Roanoke Avenue sewer line.

MAP 4: Map detailing the Roanoke Avenue Combined Sewer Outfall from Clinton Bogert Report entitled "Newark Pollution Abatement Study."

TAB C Document concerning 1948 discharge of a "yellow colored clear liquid" to Plum Creek

PVSC - April 1948 - Stream Contamination Report

TAB D Documents concerning red acid discharge to Plum Creek

O6/28/65 - Alliance memorandum regarding USACOE inspection of Plum Creek and Alliance facility; inspection identified discharge from acid pit to creek, suspected correlation to acidic levels detected in river; writer also voiced concerns regarding underground seepage from acid pit

12/22/65 - Alliance Chemical memorandum regarding USACOE
12/07/65 inspection and sampling of Plum Creek, and
expected citation; writer indicated that discharge was result of
a malfunction of the acid collection system

Index of Documents in Support of Comments Regarding CERCLA 104(e) Response of Alliance Chemical Inc. Page 2

| | TAB D (cont) | 01/11/66 - | USACOE letter of citation to Alliance for illegal discharge of acidic effluent to Plum Creek, regarding incidences noted at 06/28/65 and 12/07/65 inspections - NANSL Case No. 65-294 |
|--|--------------|------------|---|
| | | 01/12/66 - | Alliance memorandum transmitting USACOE citation letter; indicates fundamental problem is that most plant effluent is discharged to Plum Creek |
| | | 01/20/66 - | Alliance letter to USACOE regarding actions taken to correct discharge violations |
| A-A-A-A-A-A-A-A-A-A-A-A-A-A-A-A-A-A-A- | | 01/26/66 - | Alliance memorandum regarding follow-up inspection by USACOE |
| - | | 01/27/66 - | Alliance memorandum regarding second follow-up inspection by USACOE |
| | | 02/05/66 - | Alliance memorandum regarding USACOE investigation in response to tanker complaint regarding acidity of river water used in ship cooling systems |
| | | 02/09/66 - | Alliance memorandum regarding USACOE inspection of Plum Creek and facility, and discovery of red acidic discharge to creek emanating from combined flow of acid wash waters from Buildings 4 and 7 discharging to main sewer |
| Production | | 02/12/66 - | Alliance memorandum regarding 02/12/66 investigation of Plum Creek |
| | | 03/09/66 - | USACOE letter to Alliance regarding February 1966 continuing violations; notes discharges are excessively acidic and injurious to navigation |
| _ | | 03/24/66 - | Alliance letter to USACOE regarding 03/09/66 system failure and acidic effluent discharge, and detailing efforts to monitor Plum Creek |
| | | 08/05/68 - | Alliance memorandum regarding flooding problems at the facility, effects of flooding on effluent discharge system, and proposed modifications. Includes observation that current method of effluent treatment is an inadequate form of neutralization of plant |
| - | | 02/07/69 - | wastewater Alliance memorandum regarding survey of Plum Creek water |
| | | | quality at Alliance outfall. Survey pH results |

Index of Documents in Support of Comments Regarding CERCLA 104(e) Response of Alliance Chemical Inc. Page 3

| TAB D (cont) | 06/26/69 - | PVSC letter to Alliance regarding pollution of Passaic River emanating from facility, and requesting action and time schedule for cessation of polluting activities |
|--------------|------------------------------------|--|
| | 06/27/69 - | Alliance letter to PVSC regarding response to PVSC letter of 06/26/69, and detailing actions taken to date to alleviate discharge |
| | 08/13/69 - | Alliance letter to PVSC regarding time schedule of actions to be taken to alleviate discharge and connect Alliance to Avenue P sanitary and storm sewer |
| | 01/08/70 - | PVSC memorandum detailing information regarding Alliance manufacturing description, estimated flow rates, and expected connection to city sewers by 02/02/70 |
| | 02/16/79 - | PVSC letter to Alliance regarding delay of connection to city sewer, and requesting an updated schedule for cessation of polluting activities |
| | 02/19/70 - | Alliance letter to PVSC indicating estimated connection to city sewer by 03/15/70, 04/10/70 at the latest, and describing planned cessation of all discharges to Plum Creek |
| | | |
| TAB E | Documents | showing that xylol was in Alliance's waste stream in 1969 |
| TAB E | Documents 12/18/69 - | PVSC letter to Alliance regarding presence of hazardous materials in facility discharge, and requiring that material be identified and eliminated from discharge prior to connection to city sewer |
| TAB E | | PVSC letter to Alliance regarding presence of hazardous materials in facility discharge, and requiring that material be identified and eliminated from discharge prior to connection |
| TAB E | 12/18/69 - 12/24/69 - | PVSC letter to Alliance regarding presence of hazardous materials in facility discharge, and requiring that material be identified and eliminated from discharge prior to connection to city sewer Alliance memorandum indicating that most likely flammable |
| | 12/18/69 - 12/24/69 - | PVSC letter to Alliance regarding presence of hazardous materials in facility discharge, and requiring that material be identified and eliminated from discharge prior to connection to city sewer Alliance memorandum indicating that most likely flammable material in effluent is xylol |
| | 12/18/69 - 12/24/69 - Selected doc | PVSC letter to Alliance regarding presence of hazardous materials in facility discharge, and requiring that material be identified and eliminated from discharge prior to connection to city sewer Alliance memorandum indicating that most likely flammable material in effluent is xylol cuments concerning Alliance's effluent after 1972 Hydroscience letter to Alliance transmitting results of analysis of industrial waste |

Index of Documents in Support of Comments Regarding CERCLA 104(e) Response of Alliance Chemical Inc. Page 4

| TAB F (cont) | 02/22/77 - | NJDEP Industrial Waste Survey |
|--------------|------------|---|
| | 05/22/79 - | PVSC Weekly Resume for 05/21/79 - 05/25/79 |
| | 06/30/80 - | NJDEP Selected Substance Report, obtained by Maxus from NJDEP Division of Site Assessment in Robbinsville, New Jersey |
| TAB G | Documents | showing contamination of site and severe flooding |
| | 04/14/67 - | Alliance internal letter regarding flooding problems at the facility, city actions regarding the installation of new sewer lines, and difficulties presented if Alliance is required to connect to sewer lines; writer notes that sewer connection would provide the city with a method of monitoring Alliance's wastes, and would require proper neutralization of wastes entering the sewer |
| | 08/05/68 - | Alliance memorandum regarding flooding problems at the facility, effects of flooding on effluent discharge system, and proposed modifications. Includes observation that current method of effluent treatment is an inadequate form of neutralization of plant wastewater |
| | 01/23/69 - | Alliance memorandum regarding instructions for conducting sampling survey of Plum Creek. Survey pH results graph attached |
| | 02/07/69 - | Alliance memorandum regarding survey of Plum Creek water quality at Alliance outfall. Survey pH results |
| | 03/21/72 - | Alliance letter to City of Newark regarding flooding problems at facility |
| | 06/21/72 - | Alliance letter to City of Newark regarding flooding problems at facility |
| | 06/27/72 - | Alliance letter to Mayor of City of Newark regarding flooding problems at facility |

| _ | | | Support of Comments Regarding nse of Alliance Chemical Inc. |
|--------|--------------|--------------------------|---|
| _ | TAB G (cont) | 10/19/89 - | AnalytiKEM Analytical Data Report Package regarding soil sampling conducted at Alliance facility, includes sampling results, facility maps, sampling locations and effluent treatment system diagrams |
| | тав н | New Jersey | Community Right to Know Survey of Alliance's facility in 1988 |
| ~ | TAB I | Copy of ana | lysis of aerial photographs |
| rhama | тав ј | NJDEP Rep sampling da | ort of Site Investigation for Alliance Facility with Summary of ita |
| - | | | |
| Acutor | | | |
| - | | | |
| jundin | | | |

Steven L. Huntley Stroudwater Crossing 1685 Congress Street Portland, Maine 04102

November 30, 1994

Amanda G. Birrell, Esq. Vinson & Elkins One American Center 600 Congress Avenue Austin, TX 78701-3200

Subject: 104(e) Letter Sent to Alliance Chemical

Dear Amanda:

I reviewed the 104(e) letter sent by the United States Environmental Protection Agency (EPA) to Alliance Chemical, as well as Alliance Chemical's response to the EPA letter dated January 28, 1994. In their response to EPA's question regarding the production of 5-chloro-2,4-dimethoxyaniline, Alliance Chemical indicated that the first step in the synthesis of this product was the alkaline hydrolysis of 5-nitro-1,2,4-trichlorobenzene in sodium hydroxide and methanol. It is my opinion that the alkaline hydrolysis of 5-nitro-1,2,4-trichlorobenzene in sodium hydroxide and methanol generated 2,3,7,8-TCDD.

The alkaline hydrolysis of 5-nitro-1,2,4-trichlorobenzene in sodium hydroxide and methanol is analogous to the alkaline hydrolysis of 1,2,4,5-tetrachlorobenzene to produce 2,4,5-trichlorophenol (TCP). The reaction of two TCP molecules under alkaline conditions results in the generation of 2,3,7,8-TCDD. As shown in the attached figure, TCP, and consequently 2,3,7,8-TCDD, may also be formed by the alkaline hydrolysis of 5-nitro-1,2,4-trichlorobenzene.

The only difference between the alkaline hydrolysis of 5-nitro-1,2,4-trichlorobenzene in sodium hydroxide and methanol and the alkaline hydrolysis of 1,2,4,5-tetrachlorobenzene to produce TCP is that the leaving group on the 1,2,4,5-tetrachlorobenzene molecule is a chlorine (C1-) and the leaving group on the 5-nitro-1,2,4-trichlorobenzene molecule is a nitro group (NO₂-2). Whether or not the reaction actually occurs is dependent upon the characteristics of the leaving group. A good leaving group must be able to leave the molecule as a stable, weakly basic molecule or ion (Solomons, 1988). The stable molecular ions produced from the hydrolysis of 1,2,4,5-tetrachlorobenzene and 5-nitro-1,2,4-trichlorobenzene are hydrochloric acid (HCl) and nitrous acid (HNO₂-), respectively. Both HCl and HNO₂- are sufficiently stable ions under these conditions for the reactions to occur.

It is true that the alkaline hydrolysis of 1,2,4,5-tetrachlorobenzene to produce TCP will produce more 2,3,7,8-TCDD than the alkaline hydrolysis of 5-nitro-1,2,4-trichlorobenzene in sodium hydroxide and methanol. Because HCl is a weaker base than HNO₂-, Cl- is a stronger leaving group and, consequently, hydrolysis of 1,2,4,5-tetrachlorobenzene will occur to a greater extent than that of 5-nitro-1,2,4-trichlorobenzene. However, significant amounts of 2,3,7,8-TCDD would be generated by either reaction. As a Class II organic chemical, the EPA (1980) considers 5-nitro-1,2,4-trichlorobenzene "to be conducive to formation of halogenated dioxins."

Some of the other processes described in Alliance's response, namely the production of 2-chloro-1,4-diethoxy-5-nitrobenzene, 2-methoxy-5-nitrobenzenamine, and 2,5-diethoxy-4-(4-morpholinyl)-benzenediazonium tetrachlorozincate, also have a potential to generate dioxins. However, the relative amounts generated in these processes would not be as significant as the amounts of 2,3,7,8-TCDD generated by the production of 5-chloro-2,4-dimethoxyanaline. Structurally, several of the reactants used in these processes are similar to those described as Class III and Class III dioxin precursors (i.e., 2-chloro-1,4-diethoxy-5-nitrobenzene) by the EPA (1980).

The production of 5-chloro-2,4-dimethoxyaniline, 2-chloro-1,4-diethoxy-5-nitrobenzene, and 2-methoxy-5-nitrobenzenamine all involved filtration processes to purify the product. Because these processes are designed primarily to prevent the loss of product rather than to control pollution, very small particles can be expected to pass through the filter. Many of the organic byproducts generated by these processes, such as dioxins, bind strongly to small particulates, would pass through the filters, and therefore would be a part of the filtrate discharged as process effluent. The substantial organic content of the filtrate would tend to solubilize compounds that are otherwise considered insoluble in water, such as dioxins. Consequently, dioxins and other byproducts formed by these processes could be carried into the process effluent either bound to particles or dissolved in the filtrate.

Other byproducts, as well as products, manufactured by Alliance are also defined by EPA as hazardous substances. According to 40 CFR 261, chlorobenzene (hazardous waste number U037), nitrobenzene (hazardous waste number U169), aniline (hazardous waste number U012), and chlorinated benzenes Not Otherwise Specified (N.O.S) are hazardous constituents. Such compounds include commodities mass produced by Alliance, namely 2-chloro-1,4-diethoxy-5-nitrobenzene, 5-chloro-2,4-dimethoxyaniline, and 2-methoxy-5-nitrobenzenamine. Additional nitrobenzenes and chlorinated benzenes are introduced into the processes by which these compounds are made, such as 2-chloro-1,4-diethoxy benzene, 5-nitro-1,2,4-trichlorobenzene, and 2,4-dinitro chlorobenzene and are also created as intermediate products, such as 2,5-diethoxy-4-morpholino nitrobenzene and 5-chloro-2,4-dimethoxy nitrobenzene. The processes used by Alliance to manufacture 3,3'-dimethoxy benzidine and 3,3'-dimethyl benzidine, both arylamines, also utilize nitrobenzenes as the starting material. The residual nitrobenzenes and chlorinated benzenes remaining in the aqueous filtrate following product separation would be discharged along with other byproducts.

Another hazardous substance was potentially produced during the diazotization of a secondary amine, a process used by Alliance to manufacture zinc compounds. During this reaction, secondary amines, both aryl and alkyl, react with nitrous acid to yield N-nitrosoamines, which usually separate from the reaction mixture as oily yellow liquids (Solomons, 1988). A number of N-nitrosoamines, as well as nitrosoamines N.O.S., are listed as hazardous constituents by EPA (40 CFR 261).

In addition, carbon clarification cakes containing cadmium, also classified as a hazardous constituent (40 CFR 261), were disposed of as solid waste, rather than hazardous waste, until 1988.

On a more general note, I am deeply concerned that Alliance did not thoroughly respond to EPA's fourth question. Specifically, this question is intended to reveal all hazardous substances used or produced by Alliance. Based on my review of the 104(e) response, I can confidently state that many more hazardous substances were produced by Alliance than are indicated by the 104(e)

A. Birrell November 30, 1994 Page 3

response. If you require a more comprehensive understanding of actual use and production of hazardous substances by Alliance, then you may wish to encourage EPA to issue a second 104(e) letter that more specifically requires Alliance to describe all processes that may be construed as involving hazardous substances.

EPA. 1980. Dioxins. U.S. Environmental Protection Agency. Office of Research and Development. EPA. 1993. Appendix VIII to Part 261: Hazardous Constituents. U.S. Environmental Protection Agency, 40 CFR Parts 260 to 299:91-98. Solomons, T.W.G. 1988. Organic Chemistry. John Wiley & Sons.

I hope you will find this information useful. Please call me if you have any questions.

Sincerely,

Steve Huntley

Production of 2,3,7,8-Tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD) by Alkaline Hydrolysis of 1,2,4,5-Tetrachlorobenzene and Alkaline Hydrolysis of 5-Nitro-1,2,4-trichlorobenzene

5-Nitro-1,2,4-trichlorobenzene

$$CI \longrightarrow CI \longrightarrow CI \longrightarrow CI$$

$$CI \longrightarrow CI$$

Mechanism adapted from USEPA. 1980. Dioxins.

STEVEN L. HUNTLEY Senior Health Scientist

Education

M.A. Public Policy and Management, Edmund S. Muskie Institute of Public Affairs, University of Southern Maine (candidate - expected 1995)

B.S. Environmental Toxicology, University of California-Davis, 1989

Capabilities

• Human Health Risk Assessment

PCB/Dioxin Toxicology and Epidemiology

Chemical Fate and Transport

Radiometric Sediment Dating

Cause/Effect Analysis

Dose-response Modeling

Environmental Policy Analysis

Experience Summary

Mr. Huntley has extensive experience in chemical toxicology and risk assessment. The toxicology of dioxins and PCBs is an area of particular interest to Mr. Huntley. A considerable amount of his efforts over the past five years have been focused on dioxin contamination of estuarine sediments of a highly industrialized east coast waterway. In addition to these sediment investigations, Mr. Huntley has managed and developed risk assessments involving numerous chemicals including formaldehyde, dioxins, PCBs, PAHs, volatile organics, and metals. Most recently, he has concentrated his efforts on evaluating historical trends in chemical contamination of sediments using radiometric (137Cs and 210Pb) techniques.

Prior to joining ChemRisk, Mr. Huntley worked for over ten years in the electronics industry where he specialized in worker health and safety, hazardous waste management, and chemical process control. While a student at the University of California-Davis, he worked on several research projects developing analytical methods for the trace residue analysis of volatile mutagens and pesticides. Areas of special interest to Mr. Huntley are human epidemiology and the fate and distribution of toxicants in the environment.

Key Projects

Selected project experience for Mr. Huntley includes:

ChemRisk Division, McLaren/Hart 1989 - Present

- Currently manage a major sediment investigation project on the east coast. Among the primary objectives of the multi-task project is the identication of sources of chemical contaminants. Various risk related and agency monitoring activities have been performed in support of possible future litigation and/or regulatory action.
- Supervised the development of health-based cleanup levels for a PCB- and phthalatecontaminated site using probabilistic exposure analysis. The project involved the

determination of soil volumes requiring remediation using several different techniques including area averaging and kriging.

- Managed a multi-facility human health risk assessment of potential dioxin exposures through the consumption of produce grown on agricultural soils amended with a dioxin-containing mineral by-product. Consumption of milk and beef from home-grazed cattle was also evaluated. Characterization of dioxin levels in the by-product was determined for representative facilities and extrapolated to nearly 30 different facilities. Each facility was evaluated separately based on facility-specific dioxin concentrations and regional variability in vegetable, milk, and beef consumption rates.
- Investigated the environmental occurrence, formation, and toxicology of polychlorinated dibenzothiophenes (PCDTs). These compounds are sulfur-containing structural analogues of polychlorinated dibenzofurans (PCDFs). Continuing research suggest that these compounds are toxicologically similar to PCDFs and dioxins, and may be found in the environment at substantially higher concentrations than PCDFs and dioxins.
- Evaluated dioxin, PCB, PAH, petroleum hydrocarbon, heavy metal, ¹³⁷Cs, and ²¹⁰Pb database for 100 sediment cores collected from an east coast estuary. Supervised the collection and processing of sediment cores and provided analysis and interpretation of data. A major focus of this work was the correlation of sediment contamination with historical sediment deposition.
- Managed a project to assist a client with issues pertaining to the development of a rational water quality standard for TCDD in the State of Florida. Toxicological issues addressed included carcinogenic, reproductive, and immunotoxic effects in humans, as well as the potential for effects in wildlife.
- Successfully argued against using a series of environmental epidemiology studies for setting PCB groundwater standards in Wisconsin. Following initial discussions with the Wisconsin DNR, critiqued a number of epidemiology studies which DNR had relied upon for proposing a PCB groundwater standard that differed from the federal MCL. Under Wisconsin statute, the federal standard must be adopted by the State unless the State can show that there is scientifically valid evidence that was not considered by the EPA in the development of the federal MCL. In September 1991, testified before the Environmental Quality Committee on the validity of the studies in question. Following this testimony and that of the Wisconsin Paper Counsel, the Natural Resources Board voted to table the PCB rule for one year and to appoint a Scientific Advisory Panel made up of individuals from industry, government, and academia to study the issue.
- Managed a project involving potential occupational exposure to dioxins and furans from inhalation of pulp and paper mill fly ash and flue gases. An extensive sampling plan was implemented in order to characterize dioxin and particulate concentrations in flue gas and ambient air, and dioxin concentrations in fly ash and product. Using congener-specific analytical results, process data, and site-specific meteorological data, exposure point concentrations were determined by modeling emissions and dispersion. Human health risks were assessed for workers at the plant.

- Project manager and consultant to major energy resource company proposing installation of a coal-fired cogeneration power plant. Issues addressed for public hearings were the potential formation of toxic compounds by chlorination of river water (i.e., dioxin, chloroform), health risks associated with toxic air contaminants, and health risks associated with electromagnetic fields.
- Reviewed and evaluated labelling requirements related to the discharge of dioxin-containing effluents from pulp and paper mills under California's Proposition 65. Assessment included comprehensive examination of allowable level for reproductive effects from exposure to dioxin and resulted in the proposal of more scientifically based guidelines.
- Evaluated the potential for enhancement of toxic response to intermittent exposure regimens compared to continuous exposure regimens. Acute toxicity and carcinogenic animal studies were investigated for 1,3-butadiene, benzene, 2-acetylaminofluorene, and ethylene oxide.
- Provided technical support for early mortality correction of TCDD oncogenicity study. Survival analysis and statistical comparisons were used to verify adjustment of overall incidence rates. Used Global 86 Linearized Multi-Stage Model to derive cancer potency factor for the corrected data.
- Assisted in a major risk assessment of potential health risks to workers and consumers exposed to a formaldehyde-resin based paper product. Formaldehyde emissions from the paper product were modeled for consumers, distribution warehouse workers, and bottling plant workers. Human health risks were assessed for workers and consumers.
- Participated in the assessment of potential health risks associated with the consumption of
 fish caught from the Columbia River. A statistically based fish sampling program was
 conducted on the Columbia River to assess the extent of dioxin contamination in five fish
 species. Regional fish consumption rates were used to assess potential health risks to
 several sub-populations of fishermen.
- Collaborated on technical review of an Endangerment Assessment for a USEPA Region 9 CERCLA site. Based on a revised risk assessment for the site, alternative cleanup goals were proposed for polyaromatic hydrocarbons and arsenic.

Department of Environmental Toxicology, UC Davis 1988-1989

- Developed HPLC and GC methods for the analysis of the herbicide Naptalam in complex water matrices. Compared the use of solid phase adsorbents and several solvents for the extraction of this compound from natural water.
- Assisted in the development of analytical methods for the extraction of model volatile mutagens such as methylene chloride, ethylene dibromide, and several polycyclic aromatic hydrocarbons. Analyzed experimental air samples by GC-EC to determine percent recoveries. Evaluated several different resins for optimum recoveries and began preliminary work on supercritical fluid extraction from XAD resin for application to the Ames Bioassay.

General Circuits Inc., Menlo Park, CA 1981-1985

- Managed all facility operations relating to the manufacture of printed circuit boards.
- Worked closely with the California Department of Health Services regarding compliance with regulations for the storage and treatment of hazardous wastes.
- Developed a worker safety program under Cal-OSHA regulations. This involved noise level, formaldehyde and methylene chloride air monitoring, respirator training, and exhaust duct testing and calibration. Initiated a worker awareness program utilizing Material Safety Data Sheets and "on the job" safety training.

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Huntley, S.L., R.J. Wenning, D.J. Paustenbach, A.S. Wong, W.J. Luksemburg. Potential sources of polychlorinated dibenzothiophenes in the Passaic River, New Jersey. *Chemosphere* 29(2):257-272.

Michaud, J.M., S.L. Huntley, R.A. Sherer, M.N. Gray, D.J. Paustenbach. 1994. PCB and dioxin re-entry criteria for building surfaces and air. *Journal of Exposure Analysis and Environmental Epidemiology* 4(2):197-227.

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Huntley, S.L., J.M. Michaud, D. Jeffery, R.E. Keenan. 1991. Vapor-phase dioxin emissions associated with the pelletization of pulp and paper mill sludge. In: Proceedings of TAPPI '91 Environmental Conference.

Huntley, S.L., R.J. Wenning, N.L. Bonnevie, R.E. Keenan, D.J. Paustenbach, D. Adams. 1991. Scientific evaluation of natural resource damage claims associated with PCDD and PCDF contamination in the aquatic environment. In: Proceedings of TAPPI '91 Environmental Conference.

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Finley, B., R.J. Wenning, M.J. Ungs, S. Huntley, D.J. Paustenbach. 1990. PCDDs and PCDFs in surficial sediments from the lower Passaic River and Newark Bay. Proceedings to Dioxin '90 Conference.

Abstracts

Bonnevie, N.L., S.L. Huntley, R.J. Wenning. 1993. Distribution of inorganic compounds in sediments from the Newark Bay watershed. SETAC '93. Abstract #P164

Wenning, R.J., J.D. Tull, N.L. Bonnevie, S.L. Huntley, H. Bedbury. 1993. A pollution history of Newark Bay, New Jersey, as recorded in sediment cores. Accepted for presentation at the IAWPRC Symposium on Contaminated Aquatic Sediments, Milwaukee, WI. June 14-16.

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Wenning, R.J., D.G. Gunster, N. L. Bonnevie, S.L. Huntley. 1992. Nonpoint source loadings of toxic chemicals to Newark Bay. Abstract #27038. SETAC Thirteenth Annual Meeting, Pensacola, FL. Nov. 8-12.

Presentations

Huntley, S.L. 1994. Environmental Management: viewpoint from the middle — an environmental consulting firm. Guest lecturer at University of Maine, Department of Chemical Engineering. April 18.

<u>Huntley, S.L.</u> 1992. Introduction to risk assessment. Guest lecturer at Maine Toxicology Institute, University of Maine. August 7.

Huntley, S.L. 1991. Instructor for pulp and paper mill educational program on dioxin exposure and toxicology. June 24-29.

<u>Huntley, S.L.</u> 1991. Risk estimates for 2,3,7,8-TCDD 1978 and 1990 histopathology interpretations of the Kociba et al. bioassay using a biologically-based cancer model. Oral presentation at the 1991 TAPPI Environmental Conference. San Antonio Texas. April 7-10.

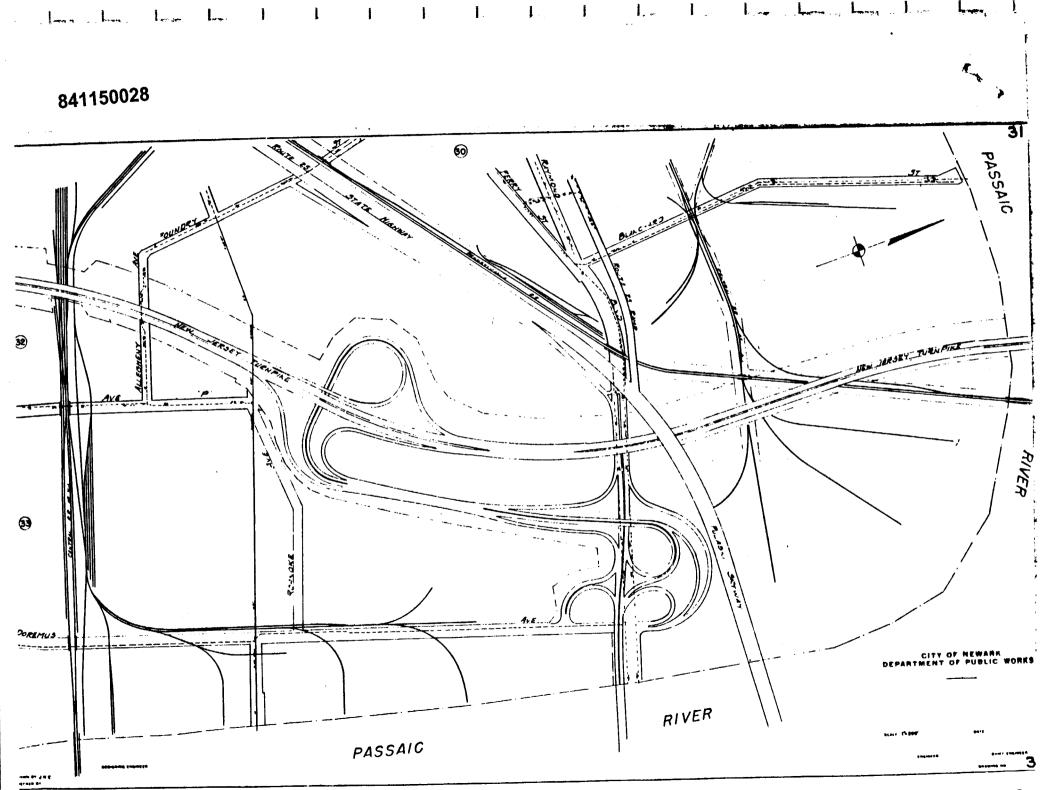
Huntley, S.L. 1991. Vapor-phase dioxin emissions associated with the pelletization of pulp and paper mill sludge. Oral presentation at the 1991 TAPPI Environmental Conference. San Antonio, Texas. April 7-10,

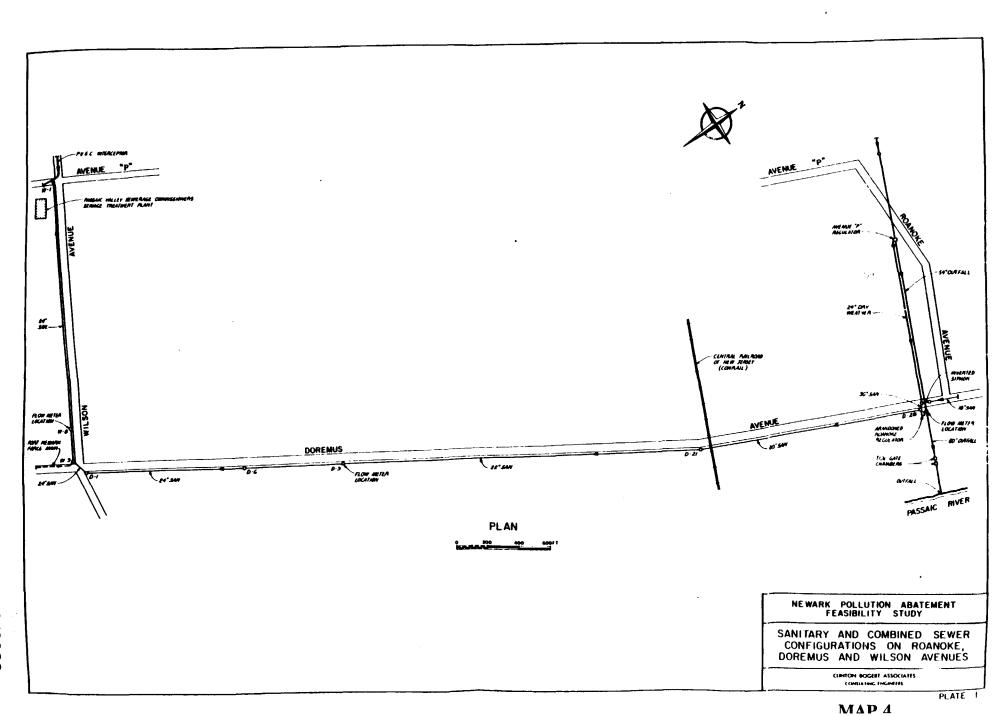
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Professional Affiliations

Society of Environmental Toxicology and Chemistry





Steen Contaminations during Atril, 1945, Lay 25, 1946, Fere 8.

- persons involved about the seriousness of this violation and all promised sooperation.
- April 25. T. L. Transport Carage, 65 Greenwood Ave., Lentelsir.

 Lil traced from this garage disentraling late Tany's brook
 by may of Greenwood Avenue storm sewer. Fur inspector
 informed the garage foremen of this violation and he
 traced it to the weshing down of busies and motors being
 overmented. Instructed to prevent this oil from reaching
 atom. School.
- Afril II. Eckelite Corporation, Grove St., Mounfield, N. J.

 A Lighty inflamable solvent (Ctyrene) being discharged
 with Giesh wash vater to the storm sever thereo to decond
 hiver via Mesdowbroth above sever, bur inspector metified
 the plant forexen who blaned this condition on the failure
 Of a pump. The pump was repaired and the violation climinated.
- April En. conneborn, inc., Rescon Avenue, Belleville, N. J.
 A discurre of milty white liquid into Felleville-Futley
 strom ditch. our inspector reports a careless employee
 dum, of four druns of this liquid down a yard druns light
 samuger was instructed to prevent each persionages.
- Agril 24. Stison Storego Astrony, believille, N. J. A discharge of iron waste into the clear water line was traced by our inspector who found the iron discharge in hereald hiver. This was late on Saturday and no one but the matchard was there. On honday the plant su crintencent could not trace this disturbance.
- April 17. Allianos Charlegi Scorpany, Avenue P. Newark, E. J.

 Pischarge of yellow colored slear liquid into meador ster.

 ditch that drains to Flum Greek. This plant is on the

 projecty of the old Amalgameted Charlesi Gompany and they

 have no industrial maste sever. Our inspector has motified

 the peners several times and only promisesare made to

 improve the consitions. Other industries are moving in an

 this projecty and we have notified them there are no severa

 to care for their maste, but they report that the landlord

 will this care of that detail. Investigation continues.
- April 27. Standard sys and Finishing Company, I Wan Bouten St., Sat.

 Lyc easte discussing into Assaid Miver, Dur inspector

 actified the engineer who rejects their sump pump motor

 but broken down this morning, but was repaired inschiately.
- Agril &C. Autley Dever Line, rear of is houte imper till, Butley.

 Broken sever line discussfill sendle into St. Jamis Erock.

 Autley sever dejartment made immulate repairs.

To: Harold

Subject: Sewage

Dated: 06/28/65

Today an investigator (Basil C. Hackett) for the Harbor Supervision Branch of the U.S. Army Engineers gave the brook and our effluent a thorough going over including the taking of samples. He found the trickle from our acid pond which gets into the brook.

He associated this with large amount of acid detected in river on Saturday and traced to brook. Could not talk him out of this! Am as sure as can be about these kind of things, that we did not acidify big portion of river (they found acid 75' from shore.)

If samples taken today match river samples taken Sat. we will receive a citation. Even if not ours, will probably match as would guess it will test as sulfates as will our leak. If cited, we will have 30 days to correct (or to show cooperation and "probably" to be able to obtain an extension of time.)

Very poor land fill makes walls of acid pit a nightmare for leakage. Will not be easy to correct. Also, must consider long term effect of seepage into ground. Does it get into brook underground? Or is it collecting underground? We do not want our structures attacked by acid from below.

A problem of the future is the fact that an adverse effect of water recirculation is the loss of the considerable diluent effect of clean water on wastes.

Apparently, the dope from Air Pollution was correct - the area is getting attention from the Army Engineers. Hackett told me almost all water-front plants have been cited. They are very thorough, use a Polaroid camera as well as a movie camera. Work from both a boat and with a shore patrol. Take samples, measure distances, record times, etc.

Color is another problem! Oil also (inorganics/solvents)

Any long term plans we make should include proper handling of our effluents.

Frank

Storge Harold -

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To: George

Subject: U.S. Army Engineers

Dated: 12/22/65

This will record the 12/7/65 visitation as feel sure a citation is going to result. (I told you of this verbally.)

Investigator Hackett, accompanied by a Mr. Young of the NJ. Mosquito Commission, sampled the brook from tidal water to our plant and said we were cause of acid in the river.

Think we convinced him that cause was malfunction of our acid collection system, and if so, citation (if it comes), should be relatively easy to handle.

Frank

1/12/65 Receive NANSL Case 65-294

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| To Score |
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| Subject U.S. asing Concerns Date 12/22/65 |
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CORPS OF ENGINEERS, U. S. ARMY SUPERVISOR OF NEW YORK HARBOR 111 EAST 16TH STREET NEW YORK, N. Y. 10003

IN REPLY REPER TO

NANSL Case No. 65-294 11 January 1966

Alliance Color & Chemical Company 33 Avenue P Newark, New Jersey

Gentlemen:

The Supervisor of New York Harbor is charged by the Congress of the United States with the responsibility of preventing obstruction or pollution of the navigable waters of New York Harbor or its tributaries.

On several occasions, commencing on 26 June 1965, and subsequent to that date, a discoloration has been observed in the tidal waters of Newark Bay adjacent to the Archer Daniels Midland Company's bulkhead located at 400 Doremus Avenue, Newark, New Jersey. Samples of the discolored tidal waters were obtained on each occasion and when tested disclosed they contained an acidic content with a pH factor in excess of allowable tolerance. Investigations disclosed that the materials, classified as a pollutant and a contravention of Federal Statutes (U.S.C. Title 33, Section 407), were discharging from a flume in the bulkhead of aforementioned property. The flume was covered by a flapper type covering which operated on an inshore to outfall velocity flow pressure principle. Continuation of the investigation disclosed that at least a portion of the pollutant originated at your facility and had been deposited into an earthen ditch, maintained as a mosquito control ditch by the Essex County Mosquito Extermination Commission, which traverses various other company owned properties and deposits its contents into aforementioned NANSL Case No. 65-294 Alliance Color & Chemical Co. 11 January 1966

flume. Samples obtained on 28 June 1965 from your plant facilities and immediately adjacent thereto, were analysed by the United States Customs Laboratory. The analysis report received indicates compatability as to content between the materials found in the tidal waters of Newark Bay and those stored and discharged from your facilities.

During our most recent inspection, conducted on 7 December 1965, acidic liquefied materials were again detected being deposited from the same flume into Newark Bay. Samples obtained from the terminus of the flume, at various locales along the mosquito control ditch and in the immediate vicinity of your plant facilities, when tested, all recorded a high acidic content. While inspecting the area three clay pipes, discharging liquid, were observed on your property. Samples of discharge from each each of these pipes were obtained and when tested disclosed they all contained a prohibited acidic content.

Under the provisions of Federal Statutes (U.S.C. Title 33, Section 407), it is unlawful to deposit, or cause, or permit to be deposited, material of any kind in any place where the material shall be liable to be carried to and deposited in any navigable water of the United States. Violators of this Statute are liable to prosecution.

Mr. Charles P. Motta, your Plant Superintendent, was contacted on 28 June and 7 December 1965 and informed of the violations herein cited.

Immediate steps should be taken to insure no prohibited materials, of any kind, are deposited at any place, where such materials may be deposited in Newark Bay.

NANSL Case No. 65-294

Case No. 65-294
Alliance Color & Chemical Co.

11 January 1966

A reinspection will be conducted to insure compliance with cited Federal Statute.

Very truly yours,

F. R. ULRICH

Major, Military Police Corps

Assistant Supervisor of

New York Harbor

| | П | |
|---|----|--|
| | П | · |
| | | To: George Subject: U.S. Army Engineers Dated: 01/12/66 |
| | | Here is a letter covering both the complaints previously reported. Will you have a copy photo'ed for me? |
| | | I judge this as their "#1 gentle" approach. |
| | | We should have careful guidance in handling. It can be answered or ignored in so far as answering. Best long range technique for having a "friend-in-court" is to answer. But - we must keep in mind the fundamental problem - everything (except strong acid from Bldg. 7) goes to the brook. |
| - | | One date (the June) was the leaking acid pit which we hope we have |
| | 11 | corrected - the other (Dec.) was a pump failure in our acid system. At least, this is what we agreed with the inspector at time. |
| | | The inspector told me he was leaving the service, so we can expect the follow-up will be made by a man who will be a stranger to us. |
| | | Frank |
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January 20, 1966

P. R. Virich, Major, Military Police Corps Assistant Supervisor of New York Barbor Corps of Engineers, V. S. Army 111 East 16th Street New York, New York 10003

Dear Major Wirtcht

References NANSL - Case No. 65-294

This will acknowledge your letter of 11 January 1966 and provide you with a remedy report. We appreciate your bringing this situation to our attention, and want you to know that both your investigations did, in fact, receive our careful and complete attention.

The June 1965 event was traced to a leak in a pit wall. Mormal subsequent repair work failed to convince us that we had effected a long-term repair, and so to fully remedy this situation, a new enlarged acid collection system has been constructed and is now in service. We would not expect any repetition of the 28 June 1965 events.

The acidic materials disclosed in your December 1965 inspection were traced to a malfunctioning collection pump. This was restored to service promptly. New inspection and maintenance schedules were instituted and careful follow-up has indicated that the collection system is performing satisfactorily.

We welcome a re-inspection and look forward to your inspector's next visit, so that we may show him our facility properly operating.

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...continued.....

P. R. Ulrich, Major, Military Police Corps Corps of Engineers, U. S. Army

Fage 2 January 20, 1966

Meantime, Major Virioh, please be assured that you and your department will have our fullest cooperation and know that we understand the need to prevent pollution of New York Marbor waters.

Sincerely,

ALLIANCE COLOR AND CHEMICAL CO.

Frank W. May General Manager

Milao

To: George

Subject: U.S. Army Engineers

Dated: 01/26/66

This will record that a 2 man team visited us today for a reinspection. Inspector A.DiClemente was in charge.

They seemed pleased. Took pictures of filled in acid pit, the new pit, and the catch basin. Would guess they will consider violations corrected and case closed (if - they do not turn up acid in lower reaches of brook, their destination after visiting our property.)

No sampling was done on our property at time of visit. (We checked right after they left as a matter of interest and we were running nuetral.)

DiClemente made a point of impressiveness of our letter and how pleased "they" were with our cooperation and cordiality.

Everything went pleasantly. Actual physical check and/or confirmation was cursory.

Frank

| To GEORGE Subject | U.S. Fam | y Encineers | Date 1/26/66 |
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To: George

Subject: U.S. Army Engineers

Dated: 01/27/66

A 3 man team re-visited us today for a good part of the morning. Apparently yesterday's re-inspection had been too cursory - at any rate, they returned today with a list of questions from a superior officer.

This time drawings - sketches, et al. were required - this was more like previous contacts, searching and penetrating questions!

As far as the group here was concerned, would judge we made out OK. Whether or not they convince supervisor!?

We should note these summarized high points which developed from their listed questions:

- A Flow to brook is clean water (cooling) plus innocuous process effluents. All acids are kept out of this system.
- B Some acids are destroyed as part of process, the resulting calcium sulfate is carted away as a solid by regular garbage disposal firm.
- C Some acids are pitted for storage. We will dispose of these in slack times or when pit fills by pumping back into process equipment and liming out. This was something I could not avoid for they asked time and again for our planning and pressed the question hard after I had taken advantages of the various cross-conversations to avoid a direct answer. Could not even get away with generalized statement we would destroy, they pressed for both "how" and "where." (I hate to commit us to a future course of action.)

Frank

cc: S. Chuck

U.S. any Engineers Date 1/27/66 Subject is travering - sketches et al were was more like previous contacts and penetrating questions The group tree was concerned, world K. White or us They list to regular garbage despose Date SEND PARTS 1 AND 3 WITH CARBONS INTACT 45 474 Rediforme PART 3 WILL BE RETURNED WITH REPLY.

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| 45 474 Rediforme | | WITH CARBONS INTACT TURNED WITH REPLY. | • |
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To: George

Subject: Harbor Patrol - U.S. Army Engineers

Dated: 02/05/66

We were visited again yesterday. A ship had entered a complaint of damage to machinery (or perhaps - fear of damage), while using river water for cooling purposes at dockside. They had investigated and found the water with a pH of 2.

The acid water was traced back to the outfall used by the brook. The inspection team said they stopped in to see us only to ask if we knew who owned the lime pits bordering the brook. They had seen Linda's warning signs re "caustic materials" but could not find the plant (?)

I had these impressions:

- A That the original complaint was about polluted water (maybe color?) (maybe smell?), and that it was discovered acid when they arrived to check.
- B That a considerable investigation might be launched by the formality of a complaint.

There was no implication that we were involved. In fact, I was given the impression that since we had solved our problems satisfactorily, they thought perhaps we might have some idea where-from the acid was coming and could help them.

Do you think this continuing pressure on the brook warrants a review of our philosophy?

Frank

Heilen Petert - U.S. afray Engineers Date We were visited ogain yesterday. a ship had entered a conflaint of clamage & mochinery (as sevents - fear of damage) while wing viver water I behide. They had suvertigated for cooling purposes and formed the water with a pH of 2. The ocid water was tweet back to the outfall used by the biert. The inspection stopped in to see us only & ask if we know who owned The line pits bordering The block. The had see Lude's warning signs se caustic meterial " but could not furtile plant I lad there empressions That The diginal complaint was n about jobbete l'acter is was descove. That a considerable envertigation launched by The formality of a There was no implication that we were envolved. Va foct, I was given the empression SEND PARTS 1 AND 3 WITH CARBONS INTACT 45 474 Rediforme PART 3 WILL BE RETURNED WITH REPLY.

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To: George

Subject:

U.S. Army Engineers

Dated: 02/09/66

The same 2 man team who was here 2/8 (and which I reported verbally), returned today for a long long visit.

Basic investigation concerns discolored and acid brook.

Discussed the evidence gathered yesterday that it was not the acid pit.

Our effluent held near neutral and good color all of morning including first 1 1/2 hours or so of their visit.

Then!

Chuck went with them and walked the brook upstream from Chem-Lime. It was red and acid all the way down. Chuck could not find any acid entering at time of tour. The acid and redness extended back to our plant.

When they arrived at our effluent pipe, we were running acid and red!! And shouldn't have been! Traced the acid to press drippage on PDC chlorsulfination filtration. Altho the main body of acid wash water was being collected, enough was routing itself across floor to regular sewer to turn that sewer acid. It was easily noticeably in the sewer pit that when the acid waste from Bldg. 7 (colorless) met the almost colorless waste from Bldg. 4 - the combined effluent was red.

We would appear well hooked. The investigators made no commitments about future action but feel sure we will be cited.

We agreed in the spirit of cooperation to shut down the acid flow, (did), make permanent remedy, (easily done) and to do our best to flush the brook of redness and acid. This not easy but we'll take a shot at it.

Inspection team will return!

Frank

U.S. army Eugeneus Subject a long long visit. Besic sivetigation concern Micured the evidence gothered yesterday that it was not the acid pit Our effluent held near nuctual and good color all of morning encluding first 1/2 hours or SO their visit Church went with Them and walked the work repotream from Chem- Time. It was sed and - signed acid all The could not find any acid entering at time of tour accel and reduces enteriled book to our plant. When they assived at our effect pipe Traced the acid & press duppage POC chloraulforation feltration. Altho The main body of seid wart water was being collected, enough war retiring itself across floor to regular sewer & turn I was easily noticeably in the sever Date SEND PARTS 1 AND 3 WITH CARBONS INTACT 45 474 Rediforme PART 3 WILL BE RETURNED WITH REPLY. 841150054

SEND PARTS 1 AND 3 WITH CARBONS INTACT PART 3 WILL BE RETURNED WITH REPLY.

Signed

Date

45 474 Rediforme

Shamus says he ran investigation of brook on Sat: 2/12/66.

Found it red. Implied was acid.

We should have been in super fine shape! Might have been red but definitely not acid.

- A We had alkalized Fri. night to get rid of the "mystery" acid lying in the brook.
- B We had no acid runs to even allow for some kind of a foul

unsigned (Frank's handwriting) JAMES J. MCMAHON CHARMAN

PASSAIC VALLEY SEWERAGE COMMISSIONERS
790 BROAD STREET

SEYMOUR A. LUBETKIN CHIEF ENGINEER THOMAS E. DURKIN, JR.

ATTORNEY

DOMINIC W. CUCCINELLO VICE CHAIRMAN CARMINE T. PERRAPATO

NEWARK, N. J. 07102

MRS. CHARLES T. SCHAEDEL CLERK-TREASURER

BENJAMIN W. GORDON
SAMUEL L. BIBER
COMMISSIONERS

February 16, 1970

Pfister Chemical Inc. Ridgefield, New Jersey 07657

Att: Mr. Judson H. Merl, Re: Alliance Plant, City of Newark Plant Engineer

Dear Mr. Merl;

In view of the fact that you had originally scheduled completion of your pollution control project for January 1970, and in view of the fact that weather has delayed this completion, pollution still continues.

The Commissioners desire an up to-date report of work accomplished and a realistic time schedule indicating when this pollution will be completely halted.

Very truly yours,

PASSAIC VALLEY SEWERAGE COMMISSIONERS

S. A. Lubetkin, Chief Engineer

SAL:mr

Certified Mail

c.c. to:Mr. Alex Goldberg

Mr. Lou Cuccinello

Mr. Thomas E. Durkin, Jr., Counsel

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CORPS OF ENGINEERS, U. S. ARMY SUPERVISOR OF NEW YORK HARBOR

111 EAST 16TH STREET NEW YORK, N. Y. 10003

IN REPLY REPER TO

NANSL Case No. 65-294 9 March 1966

Alliance Color & Cremical Co. 33 Avenue P Newark, New Jersey 07105

Gentlemen:

Reference is made to our letter of 11 January 1966 and your letter of reply dated 20 January 1966 concerning the illegal discharge of acid into Newark Bay in violation of Federal Statutes (T.S.C. Title 33, Section 407).

On several occasions, during the month of February 1966, inspections revealed that acid was still being deposited into the bay. We are aware that you are attempting to correct the situation, however, investigation disclosed that action taken to date had not completely negated the pollution.

Expeditious correction is of primary importance since the materials deposited have been found to be excessively acidic and injurious to navigation.

A reinspection will be conducted to insure compliance with the cited Federal Statute.

Very truly yours,

F. R. ULRICH

Major, Military Police Corps Assistant Supervisor of

Jouline

New York Harbor

This or a Kidox for Therack file

Red spoke

Church PH i'm a

March 24, 1966

F. R. Ulrich, Major, Military Police Corps Assistant Supervisor of New York Harbor Corps of Engineers, U. S. Army 111 East 16th Street New York, New York 10003

Dear Major Ulrich:

Reference: NANSL-Case No. 65-294

This will acknowledge your letter of March 9, 1966, and present a summary of our Company's actions during the trying days of February.

Corrective measures detailed in January had been successful, and we were, frankly, puzzled when we heard that acid in the bay was being traced to the brook outfall. Routine supervision of our flow did not show even a one time incident which could account for any part of the problem.

It was a real blow when the plant suffered a system failure on March 9th and its effluent ran acid for a brief period of time.

Although we are not attempting to excuse this violation, it was, nevertheless, a small, minor leak. Shutdown followed in a matter of minutes, and repair was made promptly. No one at Alliance could visualize this small trickle as the source of the problem in the bay. However, everyone recognized the seriousness of the situation. We elected to increase our watch on the effluent and to begin to monitor the brook along our property, and to do this with only highly placed supervisors.

After a few days on this regime, representatives of a steamship company visited and said that the brook was running acid at that time in the downstream areas. This was confirmed as so. This, despite the fact that we had numerous and continued neutral readings on the brook in the upstream areas near our plant.

P. R. Ulrich, Major, Military Police Corps

Morch 24, 1965

The only possible way to explain this (and past puzzles) was to theorize that an acid stream was entering the brook at some point downstream of Alliance.

An equally disturbing thought began to emerge at this time, and this was that Alliance was being considered the source of any acid in the brook, whether or not they were in fact the contributor.

In view of this, we felt it necessary to go to some extremes in an attempt to establish that we were not the cause of the acid waters. Production was both cancelled and rescheduled, and every effort was made to insure that we would not be a victim of mechanical or human failures. Then the monitoring of the brook was extended to its length insofar as it could be done without violating property rights of others. Readings of the brook's pH at various points were recorded together with time and date, and all correlated to the tide (because the outfall has a tide gate).

In a few days evidence enough existed to convince us that there was an acid stream entering a branch of the brook somewhere between Avenue? and Doremus Avenue and that this stream accounted for the acid in the brook and in the bay.

With this evidence in hand, we asked your people to re-investigate or, if the case was considered closed, to re-open it. After meeting with us. Mr. Shamnas agreed to a new look at the matter.

Undoubtedly, reports of subsequent findings are at your finger tips so there is no need to write further, except to add that it is our understanding an acid stream was indeed located and that it is unassociated with Alliance.

Let me reiterate that, as a matter of Corporate policy, we are dedicated to keeping acids out of this brook and welcome both any belp that you people can give us and any inspection team that cares to visit at any time.

F. R. Ulrich, Major, Military Police Corps

March 24, 1966

In closing, I'd like to take a moment to tell you that your field people have our highest praise. There has never been an instance which could lead us to say less than the best about them.

Sincerely,

ALLIANCE COLOR AND CHEMICAL CO.

Frank W. May General Manager

FWM: ao

TO: George Shulman DATE: August 5, 1968

FROM: C. P. kotta

SUBJECT: Alliance Plant Effluent

For the past six months, the Alliance plant has had increasing disruption of production because of inundation from the drainage stream. The areas effected are: Bldg. 5, drying; Bldg. 4, first floor production; Bldg. 6, downstairs office, foreman locker room, and hourly employees lunch room; and front yard, shipping and receiving.

- 1. Investigation of flooding indicates the following causes:
 - 1.1 Tide gate in Passaic River missing, or completely inoperative, and metal pipe corroded to the extent that a new tide gate, at this location, would not function properly, causing flooding during high tides and heavy rains.
 - 1.2 Hydraulic dirt movements, by the turnpike, caused abnormal flows of water into the same drainage stream being used by Alliance. Because of the problem stated in (1), periodic flooding occurred.
 - 1.3 As recently as July 10 thru July 18, flooding was continuously bad, and not until the Mosquito Commission was forced to bring in their shovel and dig debris from the drainage stream behind Refver Smelting, did the stream flow freely. This is the same area that required digging two years ago. This debris is not indigenous to Alliance, but is to the surrounding dumps. It is possible, however, that the suspended solids discharged from Alliance could add to the other debris at this location, thus adding to the obstruction.
- 2. The following information was obtained during our attempts to alleviate the stream blockage:
 - 2.1 Mr. Amabile, Director, Essex County Mosquito Commission. The Urban Renewal Project is moving ahead with its program to make land available for industry and, starting July 15, 1968, drainage streams, South of Alliance, are being dug and directed to our drainage ditch, which will all feed through one discharge pipe leading under Doremus Avenue to the Passaic River and through the tide gate as indicated in 1.1. According to Mr. Amabile, due to the inoperative tide gate, plans for a new tide gate East of Doremus Avenue, in the drainage ditch, are under study and consideration.
 - 2.2 Louis LaFera, contractor working on Avenue P, has indicated that an industrial sewer is already in Avenue P and storm sewers will be in shortly. By contacting Mr. Van Riper, City Engineer, Bureau of Sewerage, we can seek permission to tie into the Newark Sewerage System.

2.3 Mr. Berkowitz, of American Fat Rendering Plant behind Alliance, has incurred considerable losses because of the flooding condition. He is currently not hostile toward us, but was when he associated the color of the water flooding his plant to the color of the water in Alliance's acid pond. He has seen the problems as stated and now feels that we have a common problem. Mr. Berkowitz is starting litigation to recover his losses. from the problem is starting litigation to recover his losses.

Observations:

For the past several years, Alliance has had to account to the Harbor Commission, Passaic Valley Sewerage Commission, City and State, and Air and Water Pollution Authorities for the color, pH, and odors of the drainage stream. Our present method of handling our acidic waste and color is inadequate and would not serve as a convincing method of neutralization of plant waste water.

It has also become apparant that the Mosquito Commission has not been caring for the drainage stream as in years past. They forme cleared the stream every two years and serviced their "in stream" flood gates.

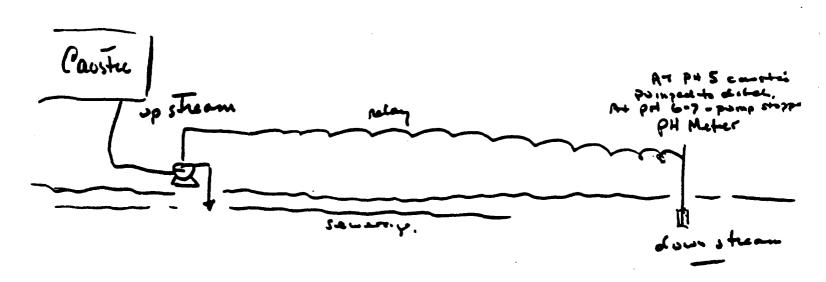
All agencies, listed above, are cognizant of Alliance's plant effluent discharged into the drainage stream and have been procrastinating, for the past several years, from applying any real pressure to Alliance. Other companies, feeding effluent to the same stream, have had pressure applied. A.D.M. Chemlime, Celanese and, to some extent, Revoer Smelting, have had to make some changes in their effluent discharges. Alliance built an acid pond. It is very difficult, however, to mask our continuous "red color" water that comes from our plant.

Sun Chemical has purchased the property adjacent to Alliance and the dumps behind Alliance and, from what I understand, plan to build a phthalocyanine blue unit.

- 3. I recommend the formation of:
 - 3.1 In-plant pollution control committee. \ hence
 - 3.2 Flow measurement information by the use of a Weir.
 - 3.3 Samplings of waste water to provide needed information.
 - 3.4 Prepare a study of the best system for waste water neutralization from current information, keeping in mind Sun Chemical's expansion plans and our final goal of connecting into
 industrial sewers and becoming isolated from flooding of the
 drainage ditch.

I suggest that we start action now toward a complete plant effluent neutralization system that will ultimately connect into the city industrial sewerage. An immediate temporary neutralization system show

be contemplated or provided to plant effluent now feeding the stream to preclude any confrontations with pollution authorities. It is my feeling that our effluent will be under scrutiny as soon as the Urban Renewal Project gets under way and a new tide gate is constructed. Also, we could be the subject of repercussion if and when American Refining litigation begins.



to: Jud Merl

From: Richard D. Leonard

February 7, 1969

Subject: Alliance Plant - Sewerage Discharge

In order to establish the approximate sever discharge rates from the Alliance Plant a 60° V-Notcaed Weir was installed across the creek handling the plant severage. The flow to the acid pond was blocked off during the measurement period.

Readings and samples were taken every 4 hours from Jan 23rd through Jan 31st (weekend excluded). From this work flow and pH conditions of our plant discharge were estimated.

The flow ranged, for the most part, between 70 gpm and 112 gpm and the pH was alkaline for long periods and acid for long periods. But even low (acid) pH readings were brought to pH 6-7 with very little treatment - 1 gram 50% caustic per gal of swwerage.

Readings have now ceased and the weir has been removed from the creek. The attached tabulation and visual plot of the readings will give a complete picture of the survey.

Mr. Ready of the Passaic Valley Sewerage called on Jan. 16, 1969 and was interested in the results of the "up coming survey." I will await word from you before corresponding with him.

SURVEY DATA FROM CREEK

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cc: CP Motta, Jr.

JANUES JUMONTARION

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CURLINE T. FERRAPATO BENJAMIN W. GDRDON SAMUEL D. BIBER COMMISSIONERS PASSAIC MALLIM SEMERAGE COMMISSIONERS

710 BROAD STREET NEWARK N. J. 07102 CENTROLE NEW TORSES

THOMAS E SURFACE STAMMER

LICE FOR THE SERVE LESS AND LE

Jume 28, 1989

Prister Chamical, Inc. Alliance Division 33 Avenue ? Namurk, New Jersey 07105

Gantlaman:

This is to inform you that polluting maternal in which Passed Daver has been traced to your plant. The incohery of this material violetes New Jersey Statutes on truer polluting at once.

Please inform the Commissioners by return usil as to who gothers to halt this pollution and a time loneitle inducating when the pollution will be eliminated.

Very truly yours,

PASSAIC VALLEY SEWERAGE COMMISSIONERS

S. A. Lubetkihî Chisî Engineer

SRI/kr

Cartified Mail

co: Commus. Gordon and McMahon Massrs. Andolino, Barcellona, Cuccinello, and Goldberg

アデ1巻で口内 ロボヨM1 コルビ 10..ロ Fidge Seld, N.J. 67857 (Tel. N.J. 101-943-8406 | N.M.O. 147-400

June 27, 1969

Mr. S. A. Imbetkin Passaid Valley Sewerage Commissioners 790 Broad Street Hawark, New Jersey 07102

Dear Mr. Lubetkin:

We are of receipt of your letter dated June 26, 1960, regarding water pollution at our Alliance Division Flant, not ark, New Jersey. Our company has already taken two curron steps to halt the pollution, which are detailed below.

After six months of continual investigation and expediting with the city of Newark and their contilitants, we have finally have had completed twin stub tie-in connections to the new sanitary and storm sewers on Avenue P at a cost to our company of \$5,000. This phase was expedited so that them we are finally in a position to discharge our treated effluent into the sanitary sewer, it would not have to disturb the new routhap on Avenue P. In addition, we have to disturb the new routhap on Avenue P. In addition, we have to disturb the consultant firm of Hydroscience, Inc. to make the lawestigation and evaluation of our plant water effluent to determine what is required by our company to properly comply with the requirements of tying into the sewer on Avenue P. Cur contact at Hydroscience is In. Luwin Barnhart.

In the completion of their investigation, we will then be able to give your Countsion a time schedule of our ability to comply with your directive.

I hope that our above unschicited actions will indicate our good faith in recognizing the problems of water pullupion and that we will do everything possible to comply

COPY MADE CORPETIONS

hr. S. A. Imbetkin Page 1 June 27, 1969

at the earliest conceivable date.

Very truly yours,

Judson H. Mari Plant Engineer

cc: D. Leonard G. Shulman C. Motta



PFISTER CHEMICAL INC Ridgefield, N. J. 07657 | Tel. N. J. 201-945-5400 | N.Y. C. 947-4934

August 13, 1969

Mr. Seymore Lubetkin, Chief Engineer Passaic Valley Sewerage Commissioners 790 Broad Street Newark, New Jersey 07102

Dear Mr. Lubetkin:

This letter is intended to supplement our letter to you of June 27, 1969, by confirming our meeting with you in your office on August 7th at which time the entire pollution problem, resolution and time table was discussed.

This meeting was attended by Mr. Charles Motta, Jr., Production Manager for Pfister/Alliance; Mr. John Connors, Project Engineer at Hydroscience, Inc. and the writer.

A subsequent meeting was held on the same day with Mr. Robert Van Riper, Division Engineer, Department of Sewers, Newark, New Jersey and Mr. Richard Gill, Chief Plumbing Inspector, Plumbing Division, Department of Health and Welfare to discuss the required procedures to tie into the Avenue P sanitary and storm sewer.

Based upon discussions with Hydroscience, Inc., and the City of Newark, a time schedule of our ability to comply with your directive is as follows:

- 1. Hydroscience to complete in-plant survey work, pre-treatment studies, lay out a treatment scheme and submit finding to Pfister by October 15, 1969.
- 2. Pfister to submit application, plans and specifications to Newark Chief Plumbing Inspector and to Newark Division Engineer, Department of Sewers for approval by September 15, 1969.
- 3. Providing approval is received from agencies detailed in item (2) by October 1, 1969, Pfister can have all its effluent properly diverted into the Avenue P sanitary and storm sewers by May 1, 1970.

PFISTER CHEMICAL INC

Mr. Seymore Lubetkin

- 2 -

August 13, 1969

I hope the above time schedule will meet with the Commission's approval. If there are any questions, please feel free to contact us. In the interim, we will keep your office advised of our progress.

Very truly yours,

PFISTER CHEMICAL INC

Judson H. Merl Plant Engineer

JHM/dt

cc: Messrs. Connors

Motta Shulman Leonard

PASSAIC VALLEY SEWERAGE COMMISSIONERS

DEPARTMENT OF SANITARY CONTROL

ALLIANCE CHEMICAL INC

1-8-70

612-

33 Avenue P, Newark, New Jersey 07105

Richard D. Leonard, Plant Manager

Dye Intermediates for Textile Industry

55

Process, Samitary, Storm

Process liquors from chemical reactions

Scheduled to feed into City Sewers by 2-2-70

100 gpm

144,000 gpd

City

Normal is 5-day; 24-hour operation

Surface Water

#4 Oil; 10,000 gal capacity

Mr. S. A. Lubetkin

February 19, 1970

Mr. S. A. Lubetkin
Chief Engineer
Passaic Valley Sewerage Commissioners
790 Broad Street
Newark, New Jersey 07102

Dear Mr. Lubetkin:

In response to your letter of February 16, 1970, we have met with and have obtained an up-to-date realistic time schedule from our contractor, Di Carolis Inc., on the completion of the Alliance Sewer Project.

Since our last letter of January 7, 1970, the manholes have been completed. The remaining work, comprising of in-plant sewer alterations, system tie-ins and utility piping will be completed March 15 at the earliest and April 1, the absolute latest. At that time, our existing system, which discharges into the area drainage ditch will be physically blocked, and all our effluent will be treated and discharged into the Avenue P sanitary and storm sewer systems.

We wish to thank your office and that of the Commissioners for their patience and understanding in allowing us to complete the project in a reasonable manner.

Very truly yours

PFISTER CHEMICAL INC

Judson H. Merl Plant Engineer

jhm;jng

via: Certified Mail

Return Receipt Pequested

bc: Messrs. G. Shulman

R. Leonard.

NOHAMOM I SEMAL NAMRIAHO

DOMINIC W. CUCCINELLO

CARMINE T. PERRAPATO

BENJAMIN W. GORDON

SAMUEL L BIBER

VICE CHAIRMAN

PASSAIC VALLEY SEWERAGE COMMISSIONERS
790 BROAD STREET

NEWARK N. J. 07102

THOMAS & DURKIN, JR.

SEYMOUR A LUBETKIN CHIEF ENGINEER

ATTORNEY
MRS. CHARLES T. SCHAEDEL

CLERK-TREASURER

December 18, 1969

P. D. C.

Pfister Chemical Inc. Ridgefield, New Jersey 07657

Attention: Mr. Judson H. Merl, Plant Engineer

Dear Mr. Merl;

A sample taken from your Newark plant of your discharge to Plum Creek on December 10, 1969, was found to be flammable and had a explosimeter reading of 80 per cent. This is a dangerous sample and will not be allowed to be discharged into the sewer when you have completed your connection.

Please determine the source of this material so that it may be isolated from the material you intend to put in the Newark Sewer.

Very truly yours,

PASSAIC VALLEY SEWERAGE COMMISSIONERS

S. A. Lubetkin, Chief Engineer

SAL:mr

c.c. to: Commrs. McMahon, Gordon,

Cuccinello Perrapato Biber

Attorney, T. Durkin, Jr.

Messrs. Goldberg Barcellona,

Cuccinello

Certified Mail

| TO STOR MENT | AT | |
|---------------------|-----------------------------------|---------------------------------|
| | ial in sewer dischafge. | 12-24-69 DATE |
| | Lubetkin refers to in his lette | r cannot be verified without se |
| the sample. We have | we a number of flammable material | ls in our plant. More than lik |
| it is xylol from | the diamisidine process. We att | empt to recover all possible xy |
| the process but o | occasionally some will probably e | scape into the sever. (AS IT So |
| HAPPENS AT RIDEE | TELD.) | |
| | | |
| DUPLICATE | SIGNED | |
| | | |
| | | |
| | | |
| | | |
| | | |
| DATE | SIGNED | |
| Rediforme | SEND PARTS I AND 3 WITH CARBONS | |
| 45 469 | PART 3 WILL BE RETURNED WITH RE | EPLY. |

DETACH AND FILE FOR FOLLOW-UP

| 14. | On-Site Disposal Facility | (No on-site disposal) |
|-----|--|--|
| | Landilli or land disposal Incinerator | Other (Specify) |
| | Associated waste numbers, from Item 13 | |
| | Description of Facility | |
| | | |
| | | • |
| | If on-site landfilling or land disposal has ev | ver been used, indicate years of use (19 to 19). |
| 15. | Off-site Disposal Facility | (No off-site disposal) |
| | Landilli or land disposal. **_ incinerator_ | Ocean Other (Specify) |
| | Associated waste number, from Item 13_ | |
| | Description of facility | |
| | Location: City or Town | County Zip Code |
| | Name of Hauler | |
| | Address of Heuler | |
| | Alternatives for ocean disposal | |
| | If off-site disposel practices have been cha | anged in the peat 12 months, indicate names and addresses of |
| | previous hauter and disposal facility. | |
| | | : |
| | | |
| | | |
| | | |
| | | |
| 16. | New Industrial Wastes | |
| | Do you expect to produce new types of wi | sete during the next calendar year (as a result of water pollution |
| | or air pollution controls, plant expansion, of the second section of the section of the second section of the section of the second section of the section of th | hange of product, process modification, etc.). Yes No Z |
| | • | |
| | General process | |
| ٠ | Accordated weets | · · · · · · · · · · · · · · · · · · · |
| | Quantity | Units |
| | Constituents of weste | |
| | | |

State of New Jersey Department of Environmental Protection Solid Weste Administration P.O. Box 2807 Trenton, New Jersey 03525

Industrial Waste Survey

| | | Please Type or Print | Peb. 22, 1977 |
|------------|---|--|---------------------------------------|
| 1. | Name of Firm (or Establishment) | ALLIANCE CHEMICAL INC. | |
| 2. | Mailing address 33 Ave | DIA P | |
| 3. | City or Town | County | Zip Code 07105 |
| 4. | Location (if not as above) | | |
| 5. | Telephone number: Area Code (20) | 1/809) | <u> </u> |
| 6 . | Name and Title of person completing | g form Richard D. Leonar | d/ Plant Hanager |
| 7. | Name and Title of chief executive of | Albert Bendelius/ | Board Chairman |
| 8. | Industry type: Manufacturing | _Storage/Break Bulk Dietr | ibution Other (Specify) |
| 9. | S.I.C. Number (5 Digit) 2815 | 10. Number of em | ployees |
| 11. | Principal products menufactured, s | tored, processed or sold | yestuffs, Intermediates |
| 12 | Heavy Metals | hemical, Corroeive, Exploeive, C I, Helogenated Hydrocarbons, G | arcinogenic, Infectious, Radioactive, |
| Ħ | you answered Yes to Item 12, please | complete the remainder of the | form |
| | you answered No to Item 12, please | | |
| 0 | vry discarded materials resulting from r solid wastes and containers contain uch as on-alte caleteris, office paper | ninated with process materials, t | |

15. Current Industrial Weste Characteristics and Management Practices

| Process (General) | Associated Waste | l | meted Que | | Wet % Mejor Consiltuente (Incl. weter) | ts of Waste Basis "Hazardous Constituents" ppm | Physical State 1-5 | Waste Properties 6-18 | Storage Prior to Oleposal 19-25 | Special Handling 26-30 | Treatment Prior to Disposal 31-56 | Frequency of Deposal 59-65 | Disposel Point 66-67 | Deposal Method 66-** | Remerks |
|----------------------------------|-------------------------------|---|-----------|----------|--|--|--------------------------|-----------------------------|--|------------------------------|--|----------------------------------|----------------------------|----------------------------|---------|
| Mfg. Dyestuffs & Intermediate | . Process & • Plant wastes | | T | 29,500,0 | 1.7% solid O organie 4 inorgan U.4% volat | none e | 2 | 9,12,14 | 24, | none | 37,48 | 59 | 66 | Sanitar Sower | , |
| | | | | | 97%+ water | | | | | • | | | | | |
| | 2. Organic sludge | | 700 | | 95% imerts (activated & filter s | | A | 9,12,14 | 21 | RODO | 1000 | 61 | 67 | 76 | |
| , | | | | | 2 organies | | | | | | | | | | |
| | | | | | | | | | , | | | | | | |
| | | | | | ,, <u>-</u> | | | | | | | | | | |
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| | | | | | | | - | | | | | | | | |

Notes:

1. Please refer to insert (Key list and completed sample of the table) for guidanos.

2. Please use the keys for guidance in completing item No. 13. Use one or more key numbers, as appropriate, when completing each flection of the table.

WASTE SURVEY KEYS

Frequency of Disposal

65. Random (spills, etc.)

(59-65)

Disposal Points (66-67)

Disposal Method

68. Composting

69. Evaporation

71. Incineration 72. Injection Well

73. Land Burial

75. Ocean 76. Recycling

74. Land Spreading

77. Sanitary Landfill

78. Chemical Landfill

. Other (Specify)

79. Surface Weter

(68-

66. On-site Disposel

67. Off-site Disposal

70. Holding Tank or Fond

59. Continuous

60. Dally

61. Weekly

62. Monthly 63. Quarterly 64. Annual

| Physical State | Treatment Prior to Disposal |
|------------------------------|-----------------------------|
| (1-5) | (31-58) |
| 1. Solid | Volume Reduction |
| 2. Liquid | 31. Compacting |
| 3. Sturry | 32. Composting |
| 4. Sludge | 33. Crushing |
| 5. Containerized gas | 34. Digestion |
| y. danie 1200 gas | 35. Evaporation |
| Veste Properties | 36. incineration |
| (6-18) | 37. Lagooning |
| | 38. Shredding |
| 6. Cărcinogenic | 30. Sureouing |
| 7. Mutagenic | |
| Teratogenic | Treetment Processes |
| Corrosive | |
| TO. Explosive | <u>Physical</u> |
| I <u>I.</u> Flamibile | 39. Adsorption |
| (12) Irritant | 40. Clarification |
| 13 Strong Sensitizer | 41. Filtration |
| 192 Taric 15. Redicective | 42. Flocculation |
| | 43. Flotation |
| 16. Infectious | 44. Gravity Separation |
| 17. Requires Special | |
| Hand ling | <u>Chemical</u> |
| 18. Other (Specify) | 45. Coogulation & Chemical |
| | Precipitation |
| Storage Prior to Disposal | 46. Ion Exchange |
| (19-25) | 47. Hembrane Processes |
| | |

19. Open Yard

20. in Building

27 Barrale on Drume

Tanks

Special Hendling (26-30) 26. Specialized Personnel 27. Protective Clothing 28. Special Equipment

25. Other (Specify)

29. Special Materials

30. Other (Sparlfv)

(Hon-Hetal)

23. Tanks or Silos (Closed) 24. Pits, Legoons, Open

48. Neutralization 49. Oxidetion-Reduction 21. Barrels or Drums (Metal) 50. Precipitation Biologival 51. Activated Sludge 52. Anserobic Digestion 53. Oxidation Ponds 54. Trickling Filters

| Rec | lametion Protesses |
|-----|-------------------------|
| | Material Recovery |
| 56. | Energy Recovery |
| | Recycle of Weste |
| 58. | Other Treatment Process |

(Specify)

STATE OF NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION SOLID WASTE ADMINISTRATION INDUSTRIAL WASTE SURVEY

GENERAL INSTRUCTIONS

- (1) This questionnaire should be completed by that technical person or persons most familiar with the plant processes and the associated process wastes. Answers should be given to the best of your knowledge and belief.
- (2) If additional forms are required, contact the New Jersey Solid Waste Administration office in Trenton. Please complete a separate questionnaire for each branch facility producing waste within New Jersey. If additional space is required to complete Question 13, please reproduce that page.
- (3) Question 13 in determining 'hazardous constituents' of each waste use the definition included in Question 12 for guidance, but do not Include those Items reflected in preceding column.
- (4) Questions 14 and 15 if more than one disposal facility is utilized, please supply the requested information for each facility using additional sheets.
- (5) Question 16 If you anticipate producing more than one new weste stream, please supply the requested information for each weste stream using additional sheets.

HYDROSCIENCE. INC.

Consultants in Mater Pollution Control
363 OLD HOOK ROAD
* WESTWOOD. NEW JERSEY 07675
201-666-2600

DONALD J. O'CONHOR EDWIN L. BARNHART JOHN L. MANGINI Plasociales
THOMAS J. MULLIGAN
JOHN P. ST. JOHN
ROBERT V. THOMANN

May 4, 1972

Mr. Richard Leonard Alliance Chemical Co., Inc. 33 Avenue P Newark, New Jersey 07105

Dear Mr. Leonard:

In accordance with your request, samples from Alliance Chemical, Inc., Newark, New Jersey, were analyzed in order to complete the Passaic Valley Sewerage Commission Survey. These tests were performed on the Industrial Waste only as the only flow entering the storm sewer is storm water. The results are as follows:

| pH | 6.3 |
|---------------------------|-------------|
| Turbidity | 1100 JCU |
| Total Solids | 16,988 mg/l |
| Total Volatile Solids | 4,164 mg/l |
| Suspended Solids | 720 mg/l |
| Volatile Suspended Solids | 475 mg/1 |
| Oil & Grease | 406 mg/1 |
| Chlorides | 5,150 mg/l |
| COD | 7,160 mg/l |
| BOD | 2,692 mg/l |
| TOC | 1,193 mg/l |
| Zn | 500 mg/l |

I hope these results will be of assistance for the completion of the questionnaire. If our office can be of further assistance, please call us.

Very truly yours,

Timothy Sullium

Timothy Sullivan

TS:bil

| Date: | May | 10, | 1972 | |
|-------|-----|-----|------|----|
| | | | | ٠. |

Plant Ref. No. 17E0446

WASTE EFFLUENT SURVEY

(For Industries Served by the Passaic Valley Sewerage Commissioners)

| Plant Name: Alliance Chemical Inc. |
|--|
| Address: 33 Avenue P, Newark, New Jersey Zip. 07105 |
| Person and Title to whom any further inquiries should be directed: |
| Richard D. Leonard - Plant Manager |
| Phone No.: 344-2344 |
| Number of Employees: 45 |
| Number of Working Days Pcr Week: Normally 5 |
| Number of Shifts Per Day: |
| Area of Property: Acres, or Approx. 150,000 Sq. Ft. |
| Type of Industry and 4 digit U.S. Standard Industrial Classification No.: Chemical - SIC 2815 |
| Finished Product(s): Dyestuffs, Intermediates for Textile Industry |
| Average Production: Confidential |
| Raw Materials Used: Amine type bases - too mumerous to itemize |
| Brief Description of Operations: Batch Chemical Processes - Clarification, Filtration, |
| Sulfonation, Nitrations, Chlorinations, Diazatations, Condensations, Simple mixing |
| and blending, drying, etc. |
| |
| * |
| |

Water received in Gallons (Note: multiply cu. ft. x 7.48)

| Purchased water in 1971 f | rom: Trist-cine x CITY | OF NEWARK |
|--|---|---|
| lst Ouarter | 7,451,600 | *************************************** |
| | 8,031,300 | • |
| 3rd Quarter | 7,455,300 | |
| 4th Quarter | 6,290,700 | ••••••••••••••••••••••••••••••••••••••• |
| Total Purchased | 971: 29,228,900 gallo | ns . |
| Well Water | | |
| 1st Quarter | · mone | |
| 2nd Quarter | , | •••••• |
| 3rd Quarter | | •••••• |
| 4th Quarter | *************************************** | *************************************** |
| Total well water rece | ived in 1971: none | ······ |
| 2nd Quarter4th Quarter Total river water TOTAL OF AL | taken in in 1971: none L WATER RECEIVED IN 1971: | 29,228,900 gallons |
| Water Use in 1971: | • | |
| Water to Product (includ | e evaporated and lost water): | 29,228,900 gallons |
| Water to Sanitary Sewer: | approx. | 29,200,000 gallons |
| Water to Storm Sewer, Ri | ver or Ditch: surface and | storm water - cannot estimate |
| TOTAL WATER U | SE IN 1971: | 29,228,900 |
| | ributary, and location of storm sewer. | • |

ANSWER THE FOLLOWING QUESTIONS ONLY IF THE PLANT WASTE INCLUDES WASTE ATTRIBUTABLE TO INDUSTRIAL OPERATIONS

(Note: Analyses should be based on a 24-hour composite sample)

| Char if any. Ind | acteristics of Plansicate units of mea | t Waste discha sure where ap | rged to sanitary or combi plicable (e.g. Mg/l). | ned sewer. after treatment |
|--------------------------|--|---|---|--|
| a) pH: | 6.3 | | b) Turbidity:110 | ∞ Jcu |
| c) Tempera | ture: ambient | | d) Radioactive? Yes | No |
| e) Solids C | oncentration: | | • | |
| 1) Tot | al Solids 16,988 | 3 mg/1 | Volatile 4,164 mg/1 | Mineral |
| 2) Sus | pended Solids | 720 mg/l | Volatile 475 mg/1 | Mineral |
| • | Grease Concentrati | | | |
| 1) Flo | atable Oils40 | 06 mg/l | *************************************** | ••••••••••••••••••••••••••••••••••••••• |
| 2) Em | ulsified Oils | *************************************** | *************************************** | *************************************** |
| g) Chloride | 5,1 | 50 mg/l | *************************************** | |
| h) Chemica | al Oxygen Demand | d (C.O.D.): | 7.160 mg/1 | ••••••••••• |
| i) 5-day Bie | o-chemical Oxygen | Demand (B.C | D.): 2,692 mg/1 | |
| • | | | | |
| hex. and | Ions—Name and itriv. Antimony, I ily discharge of ca | .cad. Mercury, | Important—list each meta Copper, Vanadium, Nick | d in waste, e.g., chromium el; give concentration and |
| | in | 500 mg/l | ******** | *************************************** |
| 1) Toxic M m) Solvent | none s—Name and cond | d concentration | | |
| | | | *************************************** | |
| n) Resins- | | • | • |): |
| o) Date an | d time span of san | npleApril. | 18-20, 197248 Hour | ly samples |
| (continuing | g for 8 hours per d : 100 gal./min.) | ay, 5 days per (Continuous 2 | week at 100 gal./day rate? 4 hours steady or with p | and peak rate of flow, e.g., (batch twice a day for 20 caks at 2 P.M., peak rate |
| | peaks - Average | rate is abou | t 100 gpm | |
| ************** | | | , , | *************************************** |
| | | | | |

| · - | O STORM SECTOR D) Turbidity: |
|---|--|
| e) Solids Concentration: | |
| - | Volatile Mineral |
| • | Volatile Mineral |
| f) Oil and Grease Concentration: | |
| • | ., |
| · | |
| • | |
| - ' |): |
| • | (B.O.D.): |
| • | |
| hex. and triv. Antimony. Lead, Mer total daily discharge of each metal.) | |
| ••••• | |
| l) Toxic Material—Name and concentration: | tion (e.g., cyanide salts, etc.): |
| l) Toxic Material—Name and concentration: m) Solvents—Name and concentration: n) Resins—Name and concentration (| Lacquers, Varnishes, Synthetics): |
| n) Resins—Name and concentration: | Lacquers, Varnishes, Synthetics): |
| n) Resins—Name and concentration: n) Resins—Name and concentration (o) Date and time span of sample: | Lacquers, Varnishes, Synthetics): |
| n) Pate and time span of sample: Do you pretreat any waste before discha | tion (e.g., cyanide salts, etc.): Lacquers, Varnishes, Synthetics): |
| n) Resins—Name and concentration: n) Resins—Name and concentration (o) Date and time span of sample: Do you pretreat any waste before dischauff so, describe process and disposal of reserved. | tion (e.g., cyanide salts, etc.): Lacquers, Varnishes, Synthetics): rge? sidue removed: |
| n) Resins—Name and concentration: n) Resins—Name and concentration (o) Date and time span of sample: Do you pretreat any waste before dischards, describe process and disposal of research. | tion (e.g., cyanide salts, etc.): Lacquers, Varnishes, Synthetics): rge? sidue removed: |
| n) Solvents—Name and concentration: n) Resins—Name and concentration (o) Date and time span of sample: Do you pretreat any waste before discha- If so, describe process and disposal of re- Certification of Laboratory doing shall be those shown in the 13th edition | Lacquers, Varnishes, Synthetics): |

Plant Manager



THE CITY OF NEWARK, NEW JERSEY KENNETH A. GIBSON, MAYOR

CORNELIUS BODINE. JR. Bubiness Administrator

DEPARTMENT OF PUBLIC WORKS
SAMUEL A. FRISCIA, DIRECTOR

Date: APR 27 1973

ROBERT VAN RIPER BUREAU ENGINEER BUREAU OF BEWERS

Mr. Richard D. Leonard, Plant Manager Alliance Chemical Inc. 33 Avenue P, Newark, N. J. 07105

Dear Mr. Leonard:

RE: Violation Title 21 Chapter 3-4 (b) and

3-6(a) Ordinance of the City of Newark

After reviewing the Waste Effluent Survey form which you completed and returned to the Passaic Valley Sewerage Commissioners dated May 10, 1972, three violations were noted under the above ordinances. These three violations are:

- (1) The BOD of your effluent discharge was 2692 mg/l.
- (2) The amount of Suspended Solids in your effluent discharge was 720 mg/l.
- (3) The amount of Greasy Materials in your effluent discharge was 406 mg/l.

Enclosed are copies of the City Ordinances which describes the acceptable limits of BOD, Suspended Solids and Greasy Material.

This letter is to be considered written notice, notifying you of the existing violation. Please contact this office within thirty days of receipt of this letter telling what action you plan to take to correct said violations. Your written response should include a time table indicating when and what will be done as well as the date the existing violation will be eliminated.,

- //// /. L

Roger Altiero, PRINCIPAL ENGINEER

RA:GPF

Certified Mail 990016



| Process (General) | Associated Waste | Estimated Qua | | Constituen Wet i % Major Constituents | Basis "Hazardous Constituents" | Physical State 1-5 | Waste Properties 6-18 | Storage Prior to Disposal 19-25 | Special Handling 26-30 | Treatment Prior to Dreposel 31-58 | Frequency of Disposal 59-85 | Disposal Point 66-67 | Disposel Method 68- | Remerks |
|--------------------------|----------------------------|-------------------|----------|--|--|--------------------------|-----------------------------|--|------------------------------|--|-----------------------------------|----------------------------|---------------------------|---|
| A. Metel Finishing | 1. Chromic Acid | Tone/Yr Cu Yde/Yr | 125,000 | (Incl. water) Water - 20% Chromic Acid - 80% | ррт | 4 | 6,9,12, | 24 | 27,28 | 37,45,48 | 59 | 67 | 78 | _ |
| | 2. Chromium Salts | | 110,000 | Water - 30% Cr3 Salts 65% Water - 30% | | 4 | 12,14 | 24 | 27,28 | 37,45,48 | 59 | 67 | 78 | |
| | 3. Pickling Liquor | , | 205,000 | Weter - 30% H2504 - 50% Fe - 40% | Pb - 500 ppm | 2 | 9,14 | 24 | 27,28 | 37,45,48 | 59 | 67 | 78 | |
| B. Paint Manufacture | 1. TiO ₂ Studge | | 150,000 | Ti02 - 40% Water - 55% | Pb - 1000 | 4, | 14 | 24 | 27 | 37 | 61 | 66 | 69 | |
| ***** | 2. Cr ⁺⁶ Sølts | | 50,000 | Water - 40% Cr6+ - 1% | | 4 | 6,14 | 24 | 27 | 37.49 | 61 | 66 | 69 | |
| | 3. Selenium Compounds | | 5,000 | water = 60% Saifelts 25% Organics 2% | 10 ppm Poly- chlorinated Biphenyls | 4 | 14 | 24 | 27 | 37 | 61 | 66 | 69 | |
| C. Industrial Laundry | 1. Organic Waste Liquid | | 40,000 | 30% Organics 10% Oil 60% Water | 25 ppm Tri- Chloro Ethylene | 2 | 6,14 | 23 | 27 | None | 60 | 67 | | UTTI be dis- continued by June 1977 |
| | 2. Freon 113 | | 10,000 | \$0% Organics 30% Water 20% 8 6 | 1000 ppm Freon | 2 | 6,14 | 23 | 27 | None | 60 | 67 | | |
| | , | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | <u> </u> | | | | | | | | | | | |

Notes.

1. Please refer to meen (Key list and completed sample of the table) for guidance.

2. Please use the keys for guidance in completing Item No. 13. Use one or more key numbers, as appropriate when completing each section of the table.

WEEKLY PISUME

Cards made Board up to /

5/21/79 - 5/25/79

✓ 5/21/79 Tomaro/Mc Laughlin
✓ 259-263 Goffle Road Hawthorne

Wiolation/Elimination - 4" pipe sealed -INDUSTRIAL ELECTRIC SERVICE CO. wash solution collects in pit and pumped into sanitary sewer

,5/21/79 Cordasco/Parr (15) Bay Ave. & Highland Ave. Glen Ridge

Greenish colored substance observed emanating from 18" outlet into Third River - traced to hospital - coming from hospital storm sewer and entering Third River

5/22/79 Fiore/Colello ANY 33 Avenue P
Newark

Routine inspection found a ph of 1 which is entering sanitary sever -Special Contacted F. D'ascensio, Industrial Department, who will take over from

5/22/79 Cordasco, Parr, Cupo WASHINGTON STREET .

Special - meeting held - reference to construction of new storm line during construction, flow to be diverted to sanitary line

ASP ARECHAM INC. While 65 Industrial So 65 Industrial So. investigating Cliston another problem - Found area cleaned vitlation atthis compony -

Violation/Elimination - Reavy rains carried runoff from dumpster into yard catch basin thence Mc Donald Drook -

5/23/79 Piore/Colello TLEXACRAFT IND.

Special - Poutine irspection revealed 55 gallon drums in Plum Creek -Drums were inspected by state agencies and are to be taken away

1 Severy P

Violation/Elimination - Waste line is now connected into sanitary sever

5/23/79 Tomaro/Mc Laughlin Follow REDMOND INDUSTRIES
1901 Pte. 203 M rairlawn

> Suds mixed with rain water flowing from property - sample polluting

5/23/79 Sventy/De Marco SCHER PROS. CHEMICALS Styertown Rd. flifton

> Violation/Elimination - Sudsy fram along south bank of brook - sample polluting

MINSEL BROOK 5/23/79 Parr/Cordasco

> Violation/Elimination - This company was the cause of Weasel Brook pollution -Heavy rains carried shampon hase from property to street storm drain thence Weasel Brook

5/24/79 Perrapato/Fleming/Cupo CONTINENTAL CHEMICAL CO. 270 Clifton Blvd. Clifton

5/24/79 Sventy/De Marco FARMLAND DAIPIES 520 Main Ave. Wallington

5/24/79 Cupo/Sventy/De Marco
Lake AVENUE STORM SEWER
Lyndhurst

5/24/79 Cordasco/Parr
LAKE STREET OUTLET
Nichols Pond
Nutley

5/25/79 Fiore/Colello
ASHLAND CHEMICAL
221 Foundry St.
Newark

5/25/79 Sventy/De Marco Sam FLEISCHERS BROOK Just Cample L Wer Carfield Betause they Felt Like it

5/25/79 Tomaro/Mc Laughlin BORO OF HAWTHORNE Lincoln St. Ditch

5/25/79 Cordasco/Parr
TOWN OF MONTCLAIR
Edgemont Pond

5/25/79 Sventy/De Marco
NEW ENGLAND MOTOR FREIGHT
520 Main Ave.
Wallington

White colored discharge flowing from 48" Fain Avenue storm - also white discharge coming from Farmland property frequent inspections failed to pin poir source of pollution - investigation continues

Report received of greenish-blue discharge from Lake Ave. storm into Passaic River - this has been a problem of Jong standing - will continue to investigate -

Special - Received complaint of steam coming from 12" outlet from foot of Lake St. outlet to pond - investigation made - found no steam coming from line

Special - Installed 125' of 6" perforated pipe - cleaning out oil oil saturated in ground

Sampled brook at 2 locations - samples were polluting, high fecal coliform

Samples show fecal coliform - source unknown

Oil slick on pond water coming from town drain - investigation to continue

Violation/Elimination - Paint spilled at dumpster - rain carried to yard storm drain, thence Saddle River on 5/25/79 observed flow from property clear



FFICE OF THE COMMISSIONER

State of New Jersey Department of Environmental Protection

Return forms to:

INDUSTRIAL SURVEY PROJECT P.O. BOX 251

TRENTON, NEW JERSEY 08602

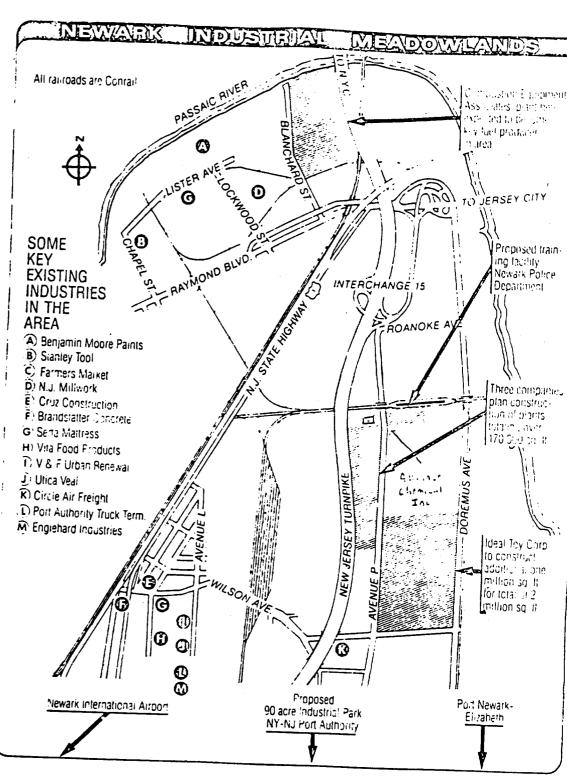
SELECTED SUBSTANCE REPORT

| SEECTED SOBSTANCE REPORT |
|---|
| ART : - General Plant Information |
| OMPLETE ONE REPORT FOR EACH PLANT SITE OR FACILITY LOCATION |
| Company Name Alliance Chemical Inc. |
| Division or Plant Name Alliance Chemical Inc. |
| Mailing Address (Street) 33 Avenue P |
| (City Town) Newark County Essex State N.J. Zip Code 07105 |
| Plant Location Address (Street) 33 Avenue P |
| (If not as above) (City/Town) Newark County Essex State N.J. Zip Code 07105 |
| . Date Plant Begun Operations At This Location |
| . Person to Contact Regarding this Report W. C. Henning Title Plant Manager |
| . Phone Number (Area Code) 201-344-2344 |
| 5. SIC Lode (Four Digit) 2865 Standard Industrial Classification (if available) |
| 3. Natire of Business Speciality Organic Chemicals |
| Number of Production Employees at this Plant Site 40 |
| 1. Does this plant manufacture, process, form, repackage, release, use, dispose of or store any of the selected substactes show on Table I of the enclosed instructions? (Check One) YES X NO |
| If your answer to number 11 is "YES", complete the Entire Report for your facility, sign and return. |
| If your answer to number 11 is "NO", complete Question 15, sign and return. |
| HEREBY, CERTIFY THAT ALL STATEMENTS MADE BY ME IN THIS REPORT ARE TRUE, COMPLETE AND COFREC O THE BEST OF MY KNOWLEDGE AND THAT ESTIMATES WHERE USED HAVE BEEN MADE IN GOOD FAITH. |
| NAME (Print) D. P. Turtle Signature 3 f 7. |
| Title Date |
| 2A. Sketch (On the reverse side of this page) or attach a copy of a map indicating the exact location of the plant site. |
| 12B. Supply your Dun & Bradstreet number if available. |
| FOR OFFICIAL USE ONLY |
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| |

05285200 44 100 2865
ALLIANCE CHEMICAL INC
PFISTER CHEMICAL
INC
P D 50x 15
RIDGEFIELD N J
NEMARK NJ
O7657



| 6 111 | | | | | , | | | |
|--|---|-------------------------------|-------------------|----------------|-----------|---------------|-------------|----------------|
| T 1 — General Infor | | | _ | - | \vdash | $\dot{+}$ | | - |
| List all of the select | ed substances included in this (tions) which are manufactured, | report along with their CAS N | lumbers (From | \vdash | \vdash | - | | t |
| | stored at the plant site: | processed, formed, reprocess | | \vdash | | \dashv | | + |
| | | | | | | I | | Ī |
| 1,2,4 Tri | chlorobenzene | 120-82-1 | | | | \dashv | - | $\overline{+}$ |
| Zinc (ZnC | l, or Zinc Dust) | 7440-66-6 | | | | \pm | \pm | t |
| | - | | | | \vdash | + | + | ļ |
| Copper (C | uso ₄ ·sh ₂ 0) | | | + | | + | ┿ | 1 |
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| w) | | | | Н- | Ц | | + | 1 |
| | es - Complete the following info | | | - | \vdash | + | +- | + |
| | icly owned treatment works (PC | | | - | \forall | 十 | + | 1 |
| | y (POTW) Passaic Val | | | | | 工 | | I |
| Address/Loca | tion 600 Wilson Ave | ., Newark, N. J. | 07105 | \coprod | | \bot | | į |
| 2. Estimated Av | erage Volume of Wastewater Dis | charged to POTW in a day | | - | \sqcup | + | + | + |
| 100,00 | | | ** | \vdash | \vdash | + | + | <u> </u> |
| 3. Briefly descri | be any pretreatment methods | | | + | Н | \dashv | + | 1 |
| 2. 2. 2 , 2. 20 · · | neutraliza | | | | | + | _ | i |
| | | | | | | : . | I | : |
| | | | | 1 | 4 | <u> </u> | 4 | + |
| | insists of: (x) Process Water, Domestic Sewage, (x) Contan | | | H | \dashv | | 1 | ! |
| • • • | Water, () Other: | | | \vdash | \dashv | + | + | i |
| B. Discharge to Nav | igable Waterway or Tributary St | ream: | | | | | I | 1 |
| - | iving Stream | | ' | Щ | 口 | - | 工 | - |
| | t Number | | | - | \sqcup | | + | +- |
| | | | | ├ ├ | \vdash | - | ╁ | ; |
| 3. EStimated ave | rage volume of wastewater disc O | - · | ı a Day | \vdash | \vdash | <u> </u> | + | _ |
| | galio | | | | | \Box | 丁 | _ |
| 4. Briefly descri | be any treatment methods | | | | | 工 | I | - |
| · | | | | Н_ | | | + | <u> </u> |
| 5. Wastewater co | onsists of: () Process Water, | () Contact Cooling, () | Non-Contact | + | \vdash | + | + | 1 |
| | Domestic Sewage, () Contain | | ashdown Water, | 十 | \vdash | + | $\dot{+}$ | <u>.</u> |
| Previous disposal pr substances at any la | Water, () Other; actices (1930—1977). Has this nd disposal site (i.e. by land sp | plant previously disposed of | | | | | | |
| off site? | ES [NO TX] | | | | | | | |
| | the following information for each | ch diennest eita. Han addisid | nnal manne if e | | , | | | |
| 272 | | | mai payes il nece | aadi y | • | | | |
| Name and Location of | V Site | , | | | | | | |
| Time period site was | s used | | | | | | | _ |
| Name of selected sur | | Physical | Amou | nt of | sele | cted | sub | st |
| discressed of at this s | | State | | | | | | 5) |



1978 • metro-Newark! • 31

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State of New Jersey _ _ artment of Environmental Protection

.. 1.60

| 1 II SELECTED SUBSTANCE REPORT | | |
|---|----------------|------------|
| UMPLETE ONE FORM FOR EACH SELEC | TED SUBSTANCE | FOR DEP US |
| Name and Location of Plant | | I.D. |
| Alliance Chemical Inc. | Newark, N. J. | n h |
| Selected Substance Name 1,2,4 Trichlorobenzene | CAS # 120-82-1 | |
| Briefly Describe its Use On The Site: | | |

Raw material used in the production of

speciality organic chemicals

| | | | | CHECK |
|---------|---|---------------------------------------|-------------|--------|
| | COMPLETE THE FOLLOWING INFORMATION FOR THE PLANT BASED ON 1978 USAGE | ENTER THE ACTUAL OR ESTIMATED AMOUNTS | USE THE RE- | ACT- I |
| | 4. QUANTITY PRODUCED ON SITE | 0 | lbs/yr. | , X |
| TIES | 5. QUANTITY BROUGHT ONTO SITE | 38350 | lbs/yr. | х |
| GUAN1 | 6. QUANTITY CONSUMED ON SITE | 38350 | lbs/yr. | |
| J | 7. QUANTITY SHIPPED OFF SITE AS (OR IN) PRODUCT | 0 | lbs/yr, | х |
| | 8. MAXIMUM INVENTORY | 16000 | lbs | х |
| _ | 9. TCTAL STACK EMISSIONS OF | /00 Insignificant Amounts | ibs/yr. | |
| HISHON | SELECTED SUBSTANCE | O H | max lbs/day | |
| : 115 | 10. TOTAL FUGITIVE EMISSIONS OF | /00 " " | lbs/yr. | |
| | SELECTED SUBSTANCE | 0 " | max lbs/day | |
| | 11. TOTAL DISCHARGE OF SELECTED | 0 | lbs/yr. | x |
| NY: | SUBSTANCE INTO SURFACE WATER | 0 | max lbs/day | x 1 |
| DISCHAR | 12. TOTAL DISCHARGE OF SELECTED SUBSTANCE INTO PUBLICLY OWNED | 50 Insignificant Amounts | lbs/yr. | |
| | TREATMENT WORKS | 0 " | max lbs/day | |

. DISPOSAL OF WASTE CONTAINING THE SELECTED SUBSTANCE

| LOCATION OF FINAL DISPOSAL SITE NAME AND ADDRESS | PHYSICAL STATE TABLE A | DISPOSAL METHOD TABLE B | QUANTITY OF SELECTED SUBSTANCE DISPOSED (lbs) | FOR DEP USE |
|--|------------------------------|-------------------------------|---|-------------|
| - None | 4 | | | |
| | | | • | |
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| • | - | | | |
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| i | - | | | |

TABLE A
PHYSICAL STATE

W-D1 Solid W-D2 Liquid W-D3 Sturry W-D4 Studge W-D9 Ciner (specify)

M-01 Composting M-02 Evaporation M-03 Holding Tank M-04 Incineration M-C5 in est on Aesi At 3 1, 47 thn TABLE B DISPOSAL METHOUS

MH07 Land Burral MH08 Land Screacing MH08 Noutralization MH10 Ocean MH11 Ocean MH12 San Living MH12 San Landfelt

M-13 Surface Water M-14 Subsurface System M-15 Pytorysis M-16 Scray (model on A6-17 Stored (Collection) A6-17 Stored (Collection)

State of New Jersey Department of Environmental Protection

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| | ART II OMPLETE ONE FORM FOR EACH SELECTE | D SUBSTANCE | 1 | FOR DEP USI |
|----|--|--|------|-------------|
| | Name and Location of Plant Alliance Chemical Inc., | | 1.0. | |
| 2. | Selected Substance Name Copper (as Cu SO ₄ - 5H ₂ | CAS# 0) 7440 - 50 · 8 | | |
| 3. | Briefly Describe its Use On The Site: Raw material used as a co of speciality organic che | mplexing agent in the production micals. | | |

| | | | | CHEC | : κ (|
|--------------------|---|---------------------------------------|--------------|------|--------------|
| | COMPLETE THE FOLLOWING INFORMATION FOR THE PLANT BASED ON 1978 USAGE | ENTER THE ACTUAL OR ESTIMATED AMOUNTS | USE THE RE- | ACT- | , F |
| | 4. QUANTITY PRODUCED ON SITE | 0 | ibs/yr. | Х | |
| THEODON HUNDANDERS | 5. QUANTITY BROUGHT ONTO SITE | 1600 | ibs/yr. | x | |
| PANT | 6. QUANTITY CONSUMED ON SITE | 0 | lbs/yr. | х. | 1 |
| ÷ | 7. QUANTITY SHIPPED OFF SITE AS (OR IN) PRODUCT | 1500 | lbs/yr. | | Ī |
| 4 | 8. MAXIMUM INVENTORY | 1000 | lbs | х | I |
| - | 9. TOTAL STACK EMISSIONS OF | 0 | lbs/yr. | Х | |
| EMISSIONS | SELECTED SUBSTANCE | . 0 | max lbs/day | x | ! |
| EMIS | 10. TOTAL FUGITIVE EMISSIONS OF | 0 | lbs/yr. | X | ì |
| _ | SELECTED SUBSTANCE | 0 | lbs/vr. | : | |
| | 11. TOTAL SISCHARGE OF SELECTED | 0 | lbs/yr. | Х | _ |
| . VT. | SUBSTANCE INTO SURFACE WATER | 0 | max lbs/ day | Х | |
| LISCHARGE | 12. TOTAL DISCHARCE OF SELECTED SUBSTANCE INTO PUBLICLY OWNED | 100 | ibs/yr. | | • |
| 3 | TREATMENT WORKS | ; 5 | max ibs day | | · |

13. DISPOSAL OF WASTE CONTAINING THE SELECTED SUBSTANCE

| LOCATION OF FINAL DISPOSAL SITE NAME AND ADDRESS | PHYSICAL STATE TABLE A | DISPOSAL METHOD TABLE B | QUANTITY OF SELECTED SUBSTANCE DISPOSED (lbs) | FOR DEP USE |
|--|------------------------------|-------------------------------|---|-------------|
| None | | | | |
| | | · | | |
| 3 | | | | |
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| | | | | |
| | - | | · | |

TABLE A
PHYSICAL STATE W-D1 Solid W-D2 Liquid W-D2 Liquid W-D3 Sturry W-D4 Studge W-D9 Timer ispecify;

M-01 Composting M-02 Evacuration M-03 Hopping Tank M-04 Indicated to M-05 or less on Aerical Composition Medical Composition M

TABLE B DISPOSAL METHODS WHOT Land Buriat
WHOT Land Buriat
WHOS Land Screading
WHOS Webstance
WHOS Dean
WHOS German

M-13 Surface Water M-14 Subsurface System M-15 Tirblys S M-1 Luray migation M-17 Jored On Site Water Jored

State of New Jersey Department of Environmental Protection

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| Departme | ut of Engitonmental Protection | | 75 | ` # |
|--|---|-----|-------|-------------|
| ART II SELECT | LETE ONE FORM FOR EACH SELECTED SUBSTANCE me and Location of Plan: Alliance Chemical Inc., Newark, New Jersey ected Substance Name Zinc (as Zn dust or ZnCl ₂) 7440-66-6 | | 75 | لرميخة |
| CMPLETE ONE FORM FOR EACH SELECTED SUBST | ANCE | | FCR D | EP USE |
| Name and Location of Plant | | 1.5 |). | |
| Alliance Chemical Inc., Newar | rk, New Jersey | # | | |
| Selected Substance Name | CAS # | | | $\neg \top$ |
| Zinc (as Zn dust or 2nCl ₂) | 7440-66-6 | | | 1 |
| Briefly Describe Its Use On The Site: | | i | | |
| Raw material, catalyst | and stabilizing | | | |

Raw material, catalyst and stabilizing agent used in the production of specialty organic chemicals.

| COMPLETE THE FOLLOWING INFORMATION FOR THE PLANT BASED ON 1978 USAGE | | | | OR EST | | USE THE RE- | | E U | | |
|---|---|-------|--|-----------|----|-------------|-------------|--------|--------|--|
| 4. | 4. QUANTITY PRODUCED ON SITE | | | 0 | | | os/yr. | х | 1 | |
| 5. | 5. QUANTITY BROUGHT ONTO SITE | | | 267000 | | | s/yr. | x | 1 | |
| 6. | 6. QUANTITY CONSUMED ON SITE | | | 0 | ΙÞ | s/yr. | v | 1 | | |
| 7. | 7. QUANTITY SHIPPED OFF SITE AS (OR IN) PRODUCT 8. MAXIMUM ! IVENTORY | | | 137000 | | | lbs/yr. | | 1 | |
| 8. | | | | 75000 | lb | s | Х | Ī | | |
| 9. | . TOTAL STACK EMISSIONS OF SELECTED SUBSTANCE | | 0 | | | ; i 15 | s/yr. | х | ì | |
| | | | | 0 | | m | ax los/day | X. | 1 | |
| 10. | 10. TOTAL FUGITIVE EMISSIONS OF SELECTED SUBSTANCE | | 0. | | | | os/yr. | X | l I | |
| | | | | _ 0 | m | ax Ibs/cay | _x _ | 1 | | |
| 11. | . TOTAL DISCHARGE OF SELECTED SUBSTANCE INTO SURFACE WATER | | 0 | | | lb | os/yr. | | | |
| | | | | | | | ax Ibs/day | _X_ | ' | |
| 12. | 2. TOTAL DISCHARGE OF SELECTED SUBSTANCE INTO PUBLICLY OWNED | | | 30000 | | ìb. | os⊬yr. | | - | |
| | TREATMENT WORKS | | | 450 | m | ax lbs.day | | ., | | |
| DISF | POSAL OF WASTE CONTAINING THE | SELEC | TE: | SUBSTANCE | E | | | | | |
| | | | SICAL DISPOSAL QUANTITY OF SELECTED SUBSTANCE DISPOSED (lbs) | | | | FOR DEP USE | | | |
| | - None | | | | | | , | | | |

TABLE B DISPOSAL METHODS

W-37 Name Bur at M-38 Land Spreading M-18 Neutral Date on M-13 Death (M-13 Dea

M-13 Surface Water M-14 Subsurface System M-15 Evrovs is M-16 baray im jor in M-17 order or in



TOI

George Shulman

DATE: April 14, 1967

FROM

R.M. Cole

SUBJECT: STORM DRAINAGE PROBLEMS AT NEWARK

History:

The past six months of relatively heavy rains has inundated the complete plant sites to such an extent that. there has been a partial curtailment of operations during some of these rains. A study has been initiated as to the why of this situation, and it was to culminate in proposals for alleviating the conditions. The original plant ditch that ran east to west from the west side of the Newark plant to the stream adjacent to the turnpike was abandoned in favor of a twelve inch diameter drain line some time in 1966. For the present conditions at the Newark plant, this drain appears to be under-sized. The line cannot take the full run off during the heavy rains, and the resultant water has backed up into plant buildings to levels of twelve to eighteen inches. A survey of this situation indicates that part of this situation can be alleviated by the installation of a catch basin at the southwest corner of the plant so as to drain that portion of the plant to the stream via an

existing six inch "sulfite line". This work is proceeding and should be completed by the week beginning April 17.

Further survey indicates that the higher elevation areas to the south and east of the Newark plant site drain directly through the production areas at Newark. In addition to this, it has also been observed that during the heavy rains experienced, the flooding of the Sun Chemical property to the east of the Newark plant raises the water table, and the hydrostatic pressure therefrom, to such a degree that there is a percolation of water up through the holes in the asphalt concrete in the areas immediately north of the warehouse.

We have observed pressures of such a magnitude so as to push water streams as much as four inches above top of concrete.

Charles Motta, Sr., on questioning, has related that there have always been some drainage problems but never to the extent that they have experienced over the last six months. In reflection of the fact that there has been a drought period for the whole northeast for the last seven years, it is surely probable that the prior conditions existed but were not seen in full intensity. Also, it is probable that the open east to west ditch that has since been abandoned, was large enough to take these run offs without back up and that actually we were still draining the whole area through the plant but at a reasonable condition as to hold-up of water within the plant confines.

Recent discussion with Mr. Robert Riglian of Sun Chemical discloses the following:

- 1. That originally, as much as five years ago, the Alliance plant site was approximately one foot above most of the surrounding area.
- 2. Approximately three years ago, the owner of the junk yard to the south of the Newark plant site started filling his properties to bring them to the existing elevation, which is approximately four to five feet above what they were originally. Since this is a rather extensive area, it is really this that has added to the problem.
- 3. That within a two year period, the Urban Development people had required Sun Chemical to demolish the abandoned buildings on the two acres of the Newark plant site, and in doing so, an additional requirement was added to build that site to as much as eighteen inches above the old grade.
- 4. Avenue P has had work done on it within the last two years that included the installation of an extension of additional water mains and underground sewers (to which, by the way, Alliance is not connected). The new sewer is very close to the surface, such that Sun Chemical actually has to pump into it and part of the extension of said sewer into the Sun property is actually above grade.
- 5. The Urban Renewal people have planned as part of their development program a network of roads in

that area. Avenue P has been extended to the south as a dirt road. Its final routing is still indeterminate as far as the Sun people are concerned at this point. An additional road is also planned adjacent to the railroad tracks running east to west from Avenue P curving, as the intersection is made with the turnpike, to the south and proceeding parallel and adjacent to the turnpike all the way to Wilson Avenue about three miles to the south and west. It is obvious that if such a plan becomes a reality, there would have to be either abandonment or relocation of the existing ditch or stream that runs along the west side of the Newark plant site. This would have serious consequences to the drainage and waste disposal problems as they exist today at Newark.

This information was new to this writer. He now plans to review with Sun Chemical Divisional Engineering the complete picture as they know it, and also to get an assessment of what their position is on this, and as to whether or not Sun and Pfister could jointly approach the Urban Development people for some resolution of these problems, part of which have been made by the programs implemented by the Urban Development people and part that have been made by the owners of the surrounding properties.

Recommendations for Immediate Implementation:

The following conclusions and recommendations are made for immediate implementation, although recognized as partial solutions to the drainage and flooding problems:

- 1. Immediately abandon the use of the dirt road at the south plant perimeter. Construct a ditch or a dike depending, upon the decisions made by Sun Chemical, along the east side of the plant perimeter, for the complete length of the property line, terminating on the north at a catch basin from which will extend a twenty-four inch concrete culvert under the road, to join up with the open stream that presently runs east to west on the north side of the railroad embankment. The cost of the work, whether a ditch or a dike, is estimated to be \$4,250.
- 2. Repair and regrade the asphalt concrete area north of the warehouse at the entrance to the plant.

 This requires that a minimal of four inches of asphalt concrete be added to the existing and pitched so as to divert the water accumulated in the low areas to the existing plant drains and to the new proposed catch basin. The estimated cost of this work is \$1.500.

Comments:

According to Sun Chemical, obviously there are many problems that have developed with this Urban Renewal group

that are unknown to this writer. I therefore would solicit from other members of the company any available information as to the conditions in that area as we know them. I further recommend that we have a meeting on this and try to formulate what our position is, not only as to drainage but relative to what we can develop as a total picture of what is required of us under this new Urban Development program.

As to the overall drainage problems, it appears that we have, by default, allowed ourselves to get into a position that is rapidly growing untendable. If the Urban Development people have committed to this new sewer, it appears they have done so without much detailed conversation with Pfister or Alliance (prior to Pfister). At best, it appears that we would be in a position that if we were forced to abandon the stream, we would have to use the sewer. This being the case. there would be extensive work required because now there would be a detailed method of monitoring our waste as well as our run off. It appears also that this will be a combination sewer, which would require neutralization of all our waste streams plus the required pumping equipment to lift this into the proposed sewer. If such a program were to become a reality, it is hard to conceive that we could comply with the obvious requirements at costs under \$50 to 60,000.

I look forward to your comments on this subject.

RMC:mz

cc Executive Committee
Operating Committee

Ed O'Connor Charles Motta, Jr. TO: George Shulman

DATE: August 5, 1968

FROM: C. P. kotta

SUBJECT: Alliance Plant Effluent

For the past six months, the Alliance plant has had increasing disruption of production because of inundation from the drainage stream. The areas effected are: Bldg. 5, drying; Bldg. 4, first floor production; Bldg. 6, downstairs office, foreman locker room, and hourly employees lunch room; and front yard, shipping and receiving.

- 1. Investigation of flooding indicates the following causes:
 - 1.1 Tide gate in Passaic River missing, or completely inoperative, and metal pipe corroded to the extent that a new tide gate, at this location, would not function properly, causing flooding during high tides and heavy rains.
 - 1.2 Hydraulic dirt movements, by the turnpike, caused abnormal flows of water into the same drainage stream being used by Alliance. Because of the problem stated in (1), periodic flooding occurred.
 - 1.3 As recently as July 10 thru July 18, flooding was continuously bad, and not until the Mosquito Commission was forced to bring in their shovel and dig debris from the drainage stream behind Refver Smelting, did the stream flow freely. This is the same area that required digging two years ago. This debris is not indigenous to Alliance, but is to the surrounding dumps. It is possible, however, that the suspended solids discharged from Alliance could add to the other debris at this location, thus adding to the obstruction.
- 2. The following information was obtained during our attempts to alleviate the stream blockage:
 - 2.1 Mr. Amabile, Director, Essex County Mosquito Commission. The Urban Renewal Project is moving ahead with its program to make land available for industry and, starting July 15, 1968, drainage streams, South of Alliance, are being dug and directed to our drainage ditch, which will all feed through one discharge pipe leading under Doremus Avenue to the Passaic River and through the tide gate as indicated in 1.1. According to Mr. Amabile, due to the inoperative tide gate, plans for a new tide gate East of Doremus Avenue, in the drainage ditch, are under study and consideration.
 - 2.2 Louis LaFera, contractor working on Avenue P, has indicated that an industrial sewer is already in Avenue P and storm sewers will be in shortly. By contacting Mr. Van Riper, City Engineer, Bureau of Sewerage, we can seek permission to tie into the Newark Sewerage System.

2.3 Mr. Berkowitz, of American Fat Rendering Plant behind Alliance, has incurred considerable losses because of the flooding condition. He is currently not hostile toward us, but was when he associated the color of the water flooding his plant to the color of the water in Alliance's acid pond. He has seen the problems as stated and now feels that we have a common problem. Mr. Berkowitz is starting litigation to recover his losses. from which is starting litigation to recover his losses.

Observations:

For the past several years, Alliance has had to account to the Harbor Commission, Passaic Valley Sewerage Commission, City and State, and Air and Water Pollution Authorities for the color, pH, and odors of the drainage stream. Our present method of handling our acidic waste and color is inadequate and would not serve as a convincing method of neutralization of plant waste water.

It has also become apparant that the Mosquito Commission has not been caring for the drainage stream as in years past. They former cleared the stream every two years and serviced their "in stream" flood gates.

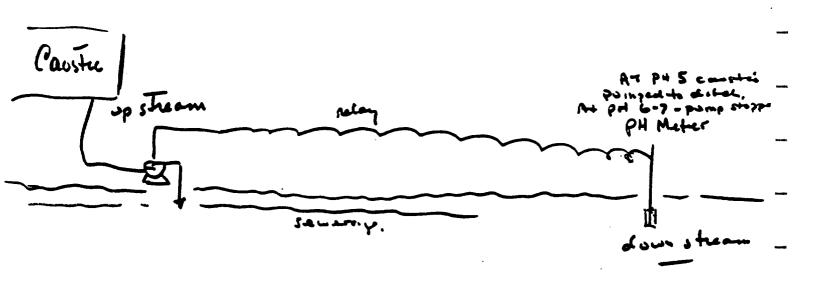
All agencies, listed above, are cognizant of Alliance's plant effluent discharged into the drainage stream and have been procrastinating, for the past several years, from applying any real pressure to Alliance. Other companies, feeding effluent to the same stream, have had pressure applied. A.D.W. Chemlime, Celanese and, to some extent, Rever Smelting, have had to make some changes in their effluent discharges. Alliance built an acid pond. It is very difficult, however, to mask our continuous "red color" water that comes from our plant.

Sun Chemical has purchased the property adjacent to Alliance and the dumps behind Alliance and, from what I understand, plan to build a phthalocyanine blue unit.

- 3. I recommend the formation of:
 - 3.1 In-plant pollution control committee. \ henced
 - 3.2 Flow measurement information by the use of a Weir.
 - 3.3 Samplings of waste water to provide needed information.
 - 3.4 Prepare a study of the best system for waste water neutralization from current information, keeping in mind Sun Chemical's expansion plans and our final goal of connecting into industrial sewers and becoming isolated from flooding of the drainage ditch.

I suggest that we start action now toward a complete plant effluent neutralization system that will ultimately connect into the city industrial sewerage. An immediate temporary neutralization system should

be contemplated or provided to plant effluent now feeding the stream to preclude any confrontations with pollution authorities. It is my feeling that our effluent will be under scrutiny as soon as the Urban Renewal Project gets under way and a new tide gate is constructed. Also, we could be the subject of repercussion if and when American Refining litigation begins.



TO: FOREMEN AND LAB

FROM: R. H. LEONARD

1-23-69

SUBJECT: SAMPLES AND MEASURIMENTS FROM CREEK

STARTING TODAY (TURUSDAY JAN 23 AND CONTINUING THRU NEXT FRIDAY JAN 31.64)
WE WILL TAKE MYASUREMENTS FROM A WEIR IN THE CREEK AND SAMPLES EVERY FINE FOUR
HOURS. THIS WILL ENABLE US TO DETERMINE THE VOLUME OF WATER DISCHARGING FROM THE
PLANT (THE ACID POND IS BLOCKED OPF) AND THE PH CONTROL WE WILL HAVE TO MAINTAIN
WHEN WE EVENTUALLY HOOK INTO THE CITY SEMLE SYSTEM.

FOREMEN:

PLEASE MAKE IT YOUR PERSONAL RESPONSIBILITY TO SEE THAT SAMPLES AND MEASUREMENTS ARE TAKEN AT THE BEGINNING AND MIDDLE OF YOUR SHIFT. MARK THE

SAMPLE WITH THE:

DATE

TIME

MEASUREMENT (DICHES)

TAKE MEASURDEENT ACCORDING TO DIAGRAM AT RIGHT.

LEAVE SAMPLES IN FOREMEN'S OFFICE:

(ART: PLEASE GIVE TO LAS IN MORNING)

TAKE AFADULS AT.

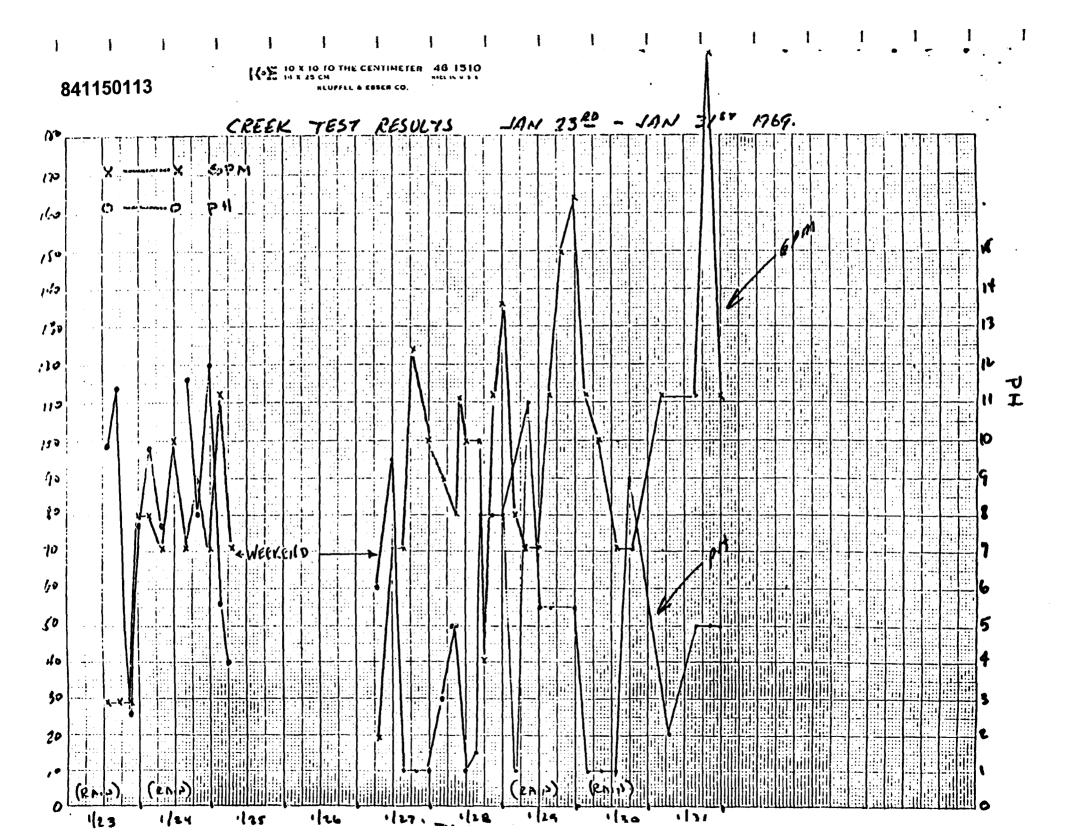
LABORATURY:

WILL MEASURE OF TACH SAMPLE AND THEM TITHATE WITH CAUSTIC AND REPORT

EVERYBOUT MUST COOPERATE IF THE RESULTS ARE TO HE MEANINGFUL

THANK TOU.

ps.



16-E 10 X 10 TO THE CENTIMETER 46 1510 KLUFFEL A EBBER CO. 11.0 1:12 No

· To: Jud Murl

From: Richard D. Leonard

February 7, 1969

Subject: <u>Alliance Plant - Severage Discharge</u>

In order to establish the approximate sewer discharge rates from the Alliance Plant a 60° V-Notcaed Weir was installed across the creek handling the plant sewerage. The flow to the acid pond was blocked off during the measurement period.

Readings and samples were taken every 4 hours from Jan 23rd tarough Jan 31st (weekend excluded). From this work flow and pH conditions of our plant discharge were estimated.

The flow ranged, for the most part, between 70 gpm and 112 gpm and the pH was alkaline for long periods and acid for long periods. But even low (acid) pH readings were brought to pH 6-7 with very little treatment - 1 gram 50% caustic per gal of suwerage.

Readings have now ceased and the weir has been removed from the creek. The attacked tabulation and visual plot of the readings will give a complete picture of the survey.

Mr. Ready of the Passaic Valley Sewerage called on Jan. 16, 1969 and was interested in the results of the "up coming survey." I will await word from you before corresponding with him.

SURVEY DATA FROM CREAK

| IJ | Date 1-23 | <u>111</u> | | <u>GPM</u> 29 | <u>명</u> 9.9 | Date Tize CPM 1-27 8 AM 20 | <u>행</u> 6.0 | Date Time | GPM 80 | <u>pH</u> 1.0 |
|----|--------------|------------|----|------------------|-----------------|-------------------------------|-----------------|------------|-----------|------------------|
| | | 4 1 | PM | 29 | 11.3 | 1-27 12 AM 71 | 9.5 | 1-29 8 AM | 71 | 11.0 |
| | 1-23 | 8 1 | PX | 29 | 2.6 | 1-27 4 PM 71 | 1.0 | 1-29 12 AM | 71 | 5.5 |
| 11 | 1-23 | 12 | PX | 80 | 7.7 | 1-27 8 PM 124 | 1.0 | 1-29 4 PM | 112 | 5.5 |
| リ | _ | | | | | 1-27 12 PM 100 | 1.0 | 1-29 8 PM | 150 | • |
| | 1-24 | 4. | Ж | 80 | 9.8 | | | 1-29 12 PM | 164 | 5.5 |
| | 1-24 | 9 | M | 71 | 7.7 | 1-28 4 AM 90 | 3.0 | | | |
| | 1-24 | 1 1 | PX | 100 | | 1-28 8 AM 80 | 3.0 | 1-30 4 AM | 112 | 1.0 |
| | 1-24 | 4 | PM | 71 | 11.6 | 1-28 9 AM 112 | 5.0 | 1-30 8 AM | 100 | 1.0 |
| _ | 1-24 | 8 1 | PM | 90 | 8.0 | 1-28 12 AM 100 | 1.0 | 1-30 1 PM | 71 | 1.0 |
| // | 1-24 | 12 1 | PX | 71 | 12.0 | 1-28 4 PM 100 | 1.5 | 1-30 4 PM | 71 | 9.0 |
| / | | | | | | 1-28 5 PM 41 | 8.0 | | | |
| | 1-25 | 4. | Ж | 112 | 5.6 | 1-28 8 PM 112 | 8.0 | 1-31 8 AK | 112 | 2.0 |
| | 1-25 | 8 . | W | 71 | 4.0 | 1-28 12 PM 136 | 8.0 | 1-31 4 PM | 112 | 5.0 |
| | | | | | | | | 1-31 8 PK | 212 | 5.0 |
| | | | | | | | | 1-31 12 PM | 112 | 5.0 |

cc: CP Motta, Jr.

March 21, 1972

Mr. Sem Friscia Director of Public Works City Hall 920 Broad Street Newark, New Jersey 07102

Dear Mr. Friscia:

I would like to call to your attention a surface water condition that exists around our chemical plant on Avenue P (Ironbound Section) that has caused our plant to shutdown in the past and now threatens to close our door again.

The problem is this: Our plant is surrounded by a drainage ditch (commonly referred to as Plum Creek) which collects run-off water from the Turnpike and surrounding properties and discharges into the bay. We are completely isolated from this creek, i.e., we do not discharge any water whatsoever into this creek, yet whenever this creek backs up the overflow empties into our plant resulting in emergency conditions which have often resulted in water damages to our stock and at times complete plant shutdowns. The shutdown causes a loss of production and business and results in unemployment for all our workers.

The only reason that Plum Creek backs up is that there are obstructions inhibiting the discharge of water to the bay. We have found that there are two areas where obstructions occur. (1) On the property of Revere Smelting where Plum Creek turns east and passes under a dirt roadway, and (2) under Avenue P. I have called the Department of Sewers on these occasions and most times they have tried to clear away the obstruction and let the creek subside, but on other occasions the response by the Department of Sewers has been delayed by equipment availability, manpower availability, the elements, or other reasons beyond my knowledge and as a result the condition previously described at our plant occurred. At this writing we have had a pending flooding condition existing at our plant since February 28th (over 3 weeks) with no apparent attempt to eleviate the same by the Department of Sewers dispite at least seven (7) calls to their office.

I see no legitimate reason why our plant must continually face this flooding problem year in and year out when a solution is obvious - install a large obstruction-free (closed) passageway for the water to flow from the turnpike to the eastern side of Avenue P.

2

Another continuing effect of the flooding is that our plant waste water that is normally discharged into the Avenue P sewer system is pre-treated prior to entering the system. The extra heavy load of water from the creek pouring into our treatment facility has caused our treatment plant to become overloaded and at times unable to handle the flooding conditions.

I am quite anxious to learn what efforts are being taken by your department to memody the above described situation. The company and the union would by appreciative of your efforts to see the above problem eliminated once and for all.

Very truly yours,

RICHARD D. LEONARD Plant Manager

RIL:me

cc: Kr. Roger Altero
Department of Sewers
Broad Street
Newark, Now Jersey

Mr. Al Zach Chief Engineer Department of Public Morks 920 Broad Street Newark, New Jersey



June 21, 1972

Mr. Sem Priseia Director of Public Works City Hell 920 Broad Street Newark, New Jersey 07102

Dear Mr. Priscia:

Since the latter part of February our plant has been under constant threat of being over run with flood waters from the drainage ditch (Flum Greek) that boarders our property. A letter to you (March 21, 1972) and a visit by yourself to our plant (May 18, 1972) has not given me any satisfaction that our problem will be rectified. I have been very patient todate, but at this writing my patience has run out.

I was promised a letter on May 18th stating your intentions on the above matter. Five weeks later there has still been no letter. I was told that the construction to eleviate the water condition would be completed in June or July 1972. Todate it has not started.

I am responsible for the production activities of this Division and responsible to take steps to keep production going sepecially when I can see impending disaster on the horizon. In dealing through your office with Messrs. Al Eack, Roger Altero and Van Reiper I have no confidence that any action will be taken in time to prevent this disaster.

This letter should reach your desk on Friday June 23rd. Should I not receive any correspondence by June 26th, outlining the positive steps the city will take to correct the problem caused by their poor design I shall have to take my cause to higher authorities. I am hoping that the latter will not be necessary.

Yest truly yours,

Richard D. Leonard Plant Manager

June 27, 1972

The Honorable Kenneth Gibson
The Mayor of the City of Newark
Newark City Hall
920 Broad Street
Newark, New Jersey 07102

Dear Mr. Mayor:

I am appealing to your office for assistance to eleviate a problem that has been plaguing our plant for many years - the threat of being inundated by waters backing up into our plant from a drainage ditch (Plum Creek) that borders our property. I am writing to you because my previous contacts with the Department of Sewers and the Director of Public Works and his Staff has only resulted in empty promises and no action.

During the rainy season of 1971 we were forced to shutdown our entire operation three times and sustained considerable property damage and loss of wages to our 50 employees. The cause of these problems is a recently installed, underdesigned drainage pipe under Avenue P. This pipe is now blocked and water from Plum Creek cannot escape to the bay and has no other route, but to back up into our plant.

I have been promised relief by the above departments on over 25 different occasions since February 1972, but todate nothing has been done to make our situation any less critical. At this writing the Plum Creek has overflowed its boundaries and is only a few feet from running over into our property.

It is my responsibility to keep this division operating and I am appealing to your office to see that proper steps are taken to ease our situation.

Very truly yours,

Richard D. Leonard Plant Manager

AnalytiKEM An American NuKEM Company

AnalytiKEM inc. 28 Springdale Road Cherry HEL NJ 08003 609/751-1122 215/923-2068

TABLE. 5

Analytical Data Report Package

for the

New Jersey Department of Environmental Protection

Division of Hazardous Waste Management

Trenton, New Jersey 08625

| Field Sample # | Laboratory Sample # | Dete of Collection |
|-------------------|------------------------|--------------------|
| BSA 10199841 S-8 | A20370-1 | 10/19/89 |
| BSA 10199842 S-10 | A20370-2 | 10/19/89 |
| BSA 10199843 S-11 | A20370-3 | 10/19/89 |

| Laboratory Name | AnalytikEM, Inc. |
|------------------------------|--------------------------|
| Certification # | NJ 04012 |
| Supervisor/Manager Signature | Mehalsknohl |
| Printed Name | Michael Shmookler, Ph.D. |

Test Report No. A20370 Page 7

| GENERAL AN | ALYSIS DATA SHEET | DEP SAMPLE NO. / BSA 10199841 S-8 |
|--|--------------------------------------|---|
| Lab Name: AnalytikEH | | |
| Lab Code: 04012 Case No. Matrix: (soil/water) Solid | , | • |
| Sample wt/vol: 10.17 | • | • • |
| % Moisture: not dec. 15 | | on Factor: 1:5 |
| | RESULIS | |
| Parameter | Sample Concentration Units: ug/kg dw | Method i Blank Units: ug/kg |
| Petroleum Hydrocarbons, by IR | 270,000 | · 20,000 U |

DEP SAMPLE NO.

Test Report No. A20370 Page 8

| GENERAL ANA | LISIS DATA SHEET | S-10 |
|-------------------------------|---------------------------------------|---|
| Lab Name: AnalytiKEM | | ! |
| Lab Code: 04012 Case No. | Contract No.: | X-195 |
| Matrix: (soil/water) Solid | Lab Se | mple ID: A20370-2 |
| Sample wt/vol: | (g/mL) g Date R | leceived: 10/19/89 |
| I Moisture: not dec. 23 | dec Dece A | nalyzed: 10/28-11/1/8 |
| 1 | Diluti | on Factor: 1:50 |
| | | į |
| į | RESULTS | } • • • • • • • • • • • • • • • • • • • |
| Parameter | Sample 'Concentration Units: ug/kg dw | Method Blank Units: ug/kg |
| Petroleum Hydrocarbons, by IR | 4,800,000 | 20,000 0 |

Test Report No. A20370 Page 9

| l _e | DEP SAMPLE NO. |
|----------------------------------|---|
| GENERAL ANALYSI | B DATA SHEET , BSA 10199843 S-11 |
| • | |
| Lab Niese: | |
| Lab Code: 04012 Case No. | Contract No.: X-195 |
| Matrix: (soil/water) Solid | Lab Sample ID: A20370-3 |
| Sample wt/vol: 10.75 (g/m | Date Received: 10/19/89 |
| I Hoisture: not dec. 10 de | Date Analyzed: 10/28-11/1/89 |
| ; | Dilution Factor: 1:400 |
| | |
| · : | RESULTS |
| • | Sample Hethod |
| Parameter | Concentration Blank Units: ug/kg dw Units: ug/kg |
| Patroleum Wydrogarhoga hw TR 100 | 20 000 T |

TABLE -,

SITE: AlliANCE Chemical LOCATION: 309-327. AVE P.

NewARK, ESSEX County, U. J.

SUMMARY OF SAMPLING DATA VOLATILES

PAGE ___ OF 12

| DATE SAMPLED O. Toban. | 19,1584 | 1 | • | . : | | • | | | | | | |
|--|----------------|--|--|--------|---------|--------------|-----|----------|--------|------|-------|--|
| MATRIX - So. / UNITS | .5-1 | 3-2 | 5-3 | 9-4 | 3-5 | 5.7 | 5-8 | 5-9 | 5-10 | 5-// | 5,/3 | |
| Chloromethene | 1. | | | | | | • | | | | 1 | |
| Bromomethane'. | 1 | | | • | | | | | | | | |
| Vinyl Chloride | | | | | | • ; | | • | | | | |
| Chloroethane | | <u> </u> | | | | | • · | | · | | (| |
| Methylene Chloride | 128 | 12.000 | 3 970) | • | | | 12 | | 17(30) | 23 | 180 | |
| Acecone . | 61 | 8,500 | | | • | | 44 | 580(1) | 300(0) | 61 | 4880 | |
| Carbon Disulfida | 1 | <u> </u> | | 1 | | | | | | | 1 | |
| 1,1-Dichloroethene | 1 | | | | | | | | | j | | |
| 1,1-Dichloroethene | <u>'</u> | | | | | | | | | 1 | | |
| 1,2-Dichloroethene | | | <u>. </u> | | | | 1 | | | ! | | |
| Chloroform | <u>.</u> - | İ | | | | | | | • | | | |
| 1,2-Dichloroethane. | , | | 1 | | | | | <u> </u> | İ | | | |
| 2-Butanone | | | | | | | | | | İ | | |
| 1,1,1-Trichloroethane | İ | | İ | | | | | | | ! | | |
| Carbon Tetrachloride | | | | | İ | | | | | İ | | |
| Xylenes | 19 | 190,000 | 5 140 D | 890(0) | 9.30(4) | 1100 | | 1800 | 30(50) | 63 | 84(0) | |
| The second secon | 1 | 1 | 0/11 | 1235. | 570 | 33.300 | 10 | 19400 | 1807 | 426 | 25 | |

SUMMARY OF SAMPLING DATA VOLATILES (CONT.)

1 1 1 1

1 1 1

1 1

| DATE SAMPLED O.T. 19,1989 | • | •• | | • | : | | • ! | | • | | |
|---------------------------------|----------|----------------|--------|-------------|--|---------------------------------------|--|--|--------------|--------------|--|
| SAMPLE NO. MATRIX - So. / UNITS | 5-1 | 5-2 | 5.3 | 5-4 | | 5-7: | | ۲.۵ | | • | . |
| | 1 | 1 | ٠,٠ | | <u> </u> | 0 . | 2-8 , | | 5-10 | 3.11 | 1 3-12 |
| Vinyl Acetate | | | • | | | | | | | , | |
| Bromodichloromethane | | | • | | | | | | | • | <u> </u> |
| 1,1,2,2-Tetrachloroethane | | 1 1 1 | 16 JD | | | · · · · · · · · · · · · · · · · · · · | | · · · · · · · · · · · · · · · · · · · | | | |
| 1,2-Dichloropropane | | | 70 40 | | | ···· | | | | ! | ; |
| trans-1,3-Dichloropropena | <u> </u> | i - | | | | | | | 1 | ! ! | <u>i·</u> |
| Trichloroethene . | | <u>.</u> . | • | | | • | | | <u> </u> | <u> </u> | <u> </u> |
| Dibromochloromethane | | | • | , | | <u>·</u> _ | | | <u> </u> | <u> </u> | |
| 1,1,2-Trichloroethane | | | | 1 | • | | | | <u>!</u> | <u> </u> | |
| Benzene | | | / | 18(50) | : | | | | <u> </u> | 1 7 | 5/30. |
| cis-1,3-Dichloropropene | | | | 74117117 | | | | <u>'</u> | <u>;</u> | ' | 13,30. |
| Bromoform | <u> </u> | | | | | • | | | <u> </u> | | - |
| 4-Hethyl-2-Pentanone | <u> </u> | | | | | | | 1 | 1 | <u> </u> | |
| 2-liexanone | | | | · | | . | <u> </u> | <u> </u> | | 1 | |
| Tetrachloroethene | | | | | <u> </u> | <u> </u> | · | <u> </u> | | 1 | - |
| Toluene | | 5,900 | 220(0) | 420(0) | | | | <u> </u> | 163 | 1. | - |
| Chlorobenzene | 15 | 3/0,000(E) | ١ | 1260(0) | | 1 | | <u>} </u> | 1490) | | 16/0 |
| Ethylbenzene | | . / . | i | | ,* | <u> </u> | ۱ (| 1 | 129(51 | 1 · | 1 |
| \$1, | | 32,000 | • | 180 (1) | 12/0(3) | 1400 | <u> </u> | 370(1 | <u>/ </u> | 13 | 22. |

841150126

| DATE SAMPLED OCT. 19,1989 | • | •. | | | • | | • | • | • | |
|--|----------|--|------------|--------------|--|--|----------|--------------|--------------|------------------|
| SAMPLE NO MATRIX - So, ' UNITS | 5-1 | 5-2 | _ <u> </u> | 5-4 | 3-5 | 5.7 | 5-8 | <u>. 5-5</u> | 5-10 | 5.11 |
| Phenol | | | • | • | | | | • | | |
| bis(2-Chloroethyl) ether | | | | | · | | <u> </u> | 1 1 | | 1 |
| 2-Chlorophenol | | | · | | | | | · . | | 11 |
| 1,3-Dichlorobenzene | | | ļ | | 43(1) | | | ! | | |
| 1,4-Dichlorobenzene | | 14,706 (J | 5 | 4,600(1) | 730(1) | 520(1) | | 120(5) | | |
| Benzyl alcohol | <u> </u> | | i | 1 | · . · | | | . 1 | | i |
| ,2-Dichlorobenzene | | 1 | | | · · | | | - | | <u> </u> |
| -Hechylphenol | | | ; i | 2 900/5) | | | : | ! | | , ; |
| ois(2-Chloroisopropyl) ether | Ì | | | | | | | • ! | | • |
| -Hethylphenol , | <u> </u> | | 1 | | | i · | | 1 | <u> </u> | |
| I-Nitroso-di-n-propylamine | <u> </u> | - ! | <u> </u> | | | 1 | | - | | ••• |
| lexachloroethana . | <u> </u> | | İ | | | | | | <u> </u> | - • |
| litrobenzene | 1 | j | ! | | | <u> </u> | | | | |
| (sophorone : | . | . [| i | <u> </u> | | | | • | <u>-</u> i | |
| 2-Hitrophenol | | i | <u>:</u> | i | | <u> </u> | <u> </u> | | <u></u> | |
| 2,4-Dimethylphenol | | . ! | | | | | <u>'</u> | | | |
| Benzolc acid | | ; | 1 . | 1 | .] | | | | <u>!</u> | |
| TT! | 1388700 | ابرداره | 0 345,4 | 00/2,313,000 | 767.400 | 169 440 | 32660 | 7/102 | 1.21 1,00 | 12,556,000 |

SUMMARY OF SAMPLING DATA SEMI-VOLATILE COMPOUNDS (CONT.)

DATE SAMPLED - OCT 19 SAMPLE NO., MATRIX- So, 1 UNITS S-2. bis (2-Chloroethoxy) methane 2,4-Dichlorophenol 14,000(5) 7400 3897) 1.2.4-Trichlorobenzene. 5200 128,000(J) 7600(J) 5200(J) 13,000 (J) Naphthalene 8.700(J) 2700 (J) 1300(1) 1300 (3) 25000 6600 3/00(3) 4-Chloroaniline .. 2600(3) 1. Hexachlorobutadiene 4-Chloro-3-methylphenol 2-Methylnaphthalene 2000(1) 1000(T) 1100(T) 1300(T) Hexachlorocyclopentadiene 2,4,6-Trichlorophenol 2,4,5-Trichlorophenol 3,600(3) 2-Chloronaphthalene . 2-Nitroaniline loasi Dimethylphthalate Acenaphthylene 110(1) 120051 18051 · 2,6-Dinitrotoluene

SUMMARY OF SAMPLING DATA SEMI-VOLATILE COMPOUNDS (CONT.)

DATE SAMPLED -007. 19, 1869 SAMPLE NO. MATRIX - 5 ... UNITS 5-13. bis (2-Chloroethoxy) methane 2,4-Dichlorophenol 1,2,4-Trichlorobenzene Naphthalene 4-Chloroeniline Hexachlorobutadiene 4-Chloro-3-methylphenol 2-Methylnephthalene Hexachlorocyclopentadiene 2.4.6-Trichlorophenol 2,4,5-Trichlorophenol . 2-Chloronaphthalene 2-Nitroaniline 110,000(5) Dimethylphthalate . Acenaphthylene

2.6-Dinitrotoluene .

DATE SAMPLED - OLT. 19.4965 SAMPLE NO. MATRIX - Soil UNITS : 5-1 5-5 5.2 5-41 3-Nitroaniline Acenaphthene . 520(5) 560 2.4-Dinitrophenol 4-Nicrophenol Dibenzofuran · · · · . 110(5) 370(5) 340 (3) 2.4-Nitrotoluene 54151 Din that aluent Diethylphthalate 4-Chlorophenyl-phonylether Fluorene 240(1) 630 560 (I) 4-Nitroaniline 4,6-Dinitro-2-methylphenol N-Nitrosodiphenylamine 170(5) 4-Bromophenyl-phenylether Hexachlorobenzene Pentachlorophenol Phenanthrene 3 900 511 3500 11 2900(1) 2800(J) 3500 Anthracene 1905 (80 (x) 920 (57 860

DATE SAMPLED . OCT. / SAMPLE NO. HATRIX - So. UNITS . 5-9 5-10 3-11 Di-n-butylphthalate. 120(3B) 350/18 710 Fluoranthene 4500(5) 5405(5) 5100 2800(5) 5700 2500 3100(J) 2400(5) 4500 (5) 4.80d J) Butylbenzylphthalate 140(1) 3,3-Dichlorobenzidine , 800,000E 16,060(3) Benzo (a) anthracene 1306 (I) 2700(I) 1400 ana naa Chrysene 1500 (5) 2763(3) 1500 3/1000 (3) 4600 (5) bis(2-Ethylhexyl) phthelate 5900(1) 124000(0) 170(50) 15,000 (0) :7944 20,000 (T) Di-n-octylphthelate 72(1) Benzo (b) fluoranthene 4400 (51 12305(5) 4500(5) 12300 Benzo (k) fluoranthene Benzo (a) pyrene 3700/51 1980(3) 2700(5) 1100 Indeno (1,2,3-cd) pyrene 4,000 (5) | 820 (3) | 790 (5) | 830(3) Dibenz (a,h) anthracene 660/11 110 (5) Benzo (g,h,i) perylene 2800 (5) 760 (7) 690(3) 1840(5)

SUMMARY OF SAMPLING DATA SEMI-VOLAȚILE COMPOUNDS (CONT.)

| DATE SAMPLED OLT. 15,1989 SAMPLE NO. HATRIX - S! UNITS | |
|--|-------------|
| Di-n-butylphthelate | <i>S-13</i> |
| Fluoranthene | |
| Pyrene | |
| Butylbenzylphthalate | |
| 3,3-Dichlorobenzidine | |
| Benzo (a) anthracene | |
| Chrysene '. | |
| bis(2-Ethylhexyl) phthalate | 55000 (1) |
| Di-n-octylphthalate | |
| Benzo (b) fluoranthene | |
| Benzo (k) fluoranthene | |
| Benzo (a) pyrene | |
| Indeno (1,2,3-cd) pyrene | |
| Dibenz (a,h) anthracene | |
| Benzo (g,h,i) perylene | |
| | |

SUMMARY OF SAMPLING DATA
PESTICIDES AND PCBs

PAGE 9 OF 12.

| | | • | | | PESTIC | IDES AND PCBs | · | |
|--|--------------|-------------|-----|---------------------------------------|--------------|---------------|---------------------------------------|-------------|
| DATE SAMPLED - (SAMPLE NO. HATRIX - So./ UNITS | oeT:/5,/5891 | : : | | • | Norte | De Tected | | |
| ılpha-BiiC | | | | | • | | | |
| peta-BHG | • | `. | | • | | | | |
| delta-BHC | | · · · · · · | | • | | | | |
| jemma - BHG | | | | • • | | | | i |
| leptachlor | | | ; | | | • | • | .* |
| ldrin | | • . • | • | . : . | | | | |
| eptachlor epo | xide . | | | • | | • | | |
| indosulfan I | | • | | | | | | |
| Dieldrin | | | | | | | ; · | |
| . 4 DDE : | | | | | • | | , , , , , , , , , , , , , , , , , , , | |
| indrin . | .1 | | · . | | , | | | |
| indosulfan II | | ·.: | | · · · · · · · · · · · · · · · · · · · | | | | |
| ,4' -DDD | | | | | | | | |
| indosulfan sul | fate | 1 | | .4 | | | • | |
| ,4' -DDT | | | | | | | | |
| lethoxychlor | | •. | | | | · . | | : |
| Endrin ketone | • | | | · | • | , | 1 | · |

SUMMARY OF SAMPLING DATA PESTICIDES AND PCBs (CONT.)

| DATE SAMPLED -O SAMPLE NO. MATRIX - 5/ | et 19,1989 | | | | | | | | | | | , |
|--|------------|-----|----------|-----|--------------|-----------|-------------|----------|----------|------|------|---|
| UNITS | 5-1 | 5-2 | 5.3 | 5-4 | 5-5 | 5.7 | 5-8 | J-64 | 5-10 | 5-11 | 5-13 | |
| alpha-Chlordana | | | | | | | | | : | | | . • |
| gamma-Chlordane | | | <u> </u> | İ | | | | | | | · | • |
| Toxaphene | | | | ٠ ، | : | | | | | | | 1 |
| Aroclor-1016 | | | : | | | | | | <u>}</u> | | | |
| Aroclor-1221 | | | | | .• | | | | | | | |
| Aroclor-1232 | | | | | | | | | • | | | *************************************** |
| Aroclor-1242 | | | | | • | | | | | | | |
| Aroclor-1248 | 16,640 (D) | | | i | • | 5000/01 | L-,,-,,-,-, | 4900 (D) | | | | |
| roclor-1254 | 1 | | | | | 4/900 (D) | | | | · | | |
| Aroclor-1260 | | | j | | | | | · | | | | ··· |

| • | • | | | | | | • | 3 | | | | | |
|-----------|-----------|-------|-------|-------|--------|----------|-------|-----------|----------|---------|---------|---|------|
| mulassaog | | 1280 | | 04.8 | | | 1 | , CL 3 | | 1 | | · | |
| Nickel . | 576 | 5:36 | 1.130 | 3.96 | } | |) | 1551 | į. | , | 27 | • | • |
| Нетсику | €.39 | 7.2 | 72.0 | 3'0 | 11 | 1 4.6 | 41 | 2.0 | , | 196.0 | 69.0 | | |
| eseuv2uvy | 1220 | 350 | 350 | 450 | 700 | 128 | 087 | 319 | 1.679 | bit | 197 | • | |
| mulsengeN | l <u></u> | 2350 | 2430 | 0768 | ן י | .099/ | | 3350 | ! | 2620 | | | 1 |
| basi | | SLA | J | | , j | 759 | | 07,01 | 1 | 7,51 | ost | | • |
| Itou | 00L C C | 00/5/ | 00677 | 72700 | 00762 | 068 61 | 00561 | 60}L./ | 005 97 | 00667 | 28,200 | | |
| Copper | (6) | hht | 981 | Lor | 1.50 | 475 | 7.53 | 050/ | ७७७ | 211 | 130 | • | • |
| Cobalc | • | | | | . 1 | | | .] | | | | | |
| Сркомічя | 7.59 | 9.32 | ; | 125 | P.3C | 4.05 | 3/7 | 517 | €.31 | _तका | 974/1 | | ·. • |
| Calcium | ०१५६ | 067.8 | 0785 | | 01:112 | C.{.\$]' | 7330 | CP (2) | | 2730 | 095/7 | | |
| mulmbad | 41 | 3,6 | 331 | 3.// | 7.01 | 2.2 | | 0.5 | | [[1] | · (1.1) | | |
| geskjjime | 4.6 | 15.6 | 1% | 1.2 | 41/7 | 13.4 | 2,3 | 3.5 | 12.9 | 0.8 | 7:5 | | |
| aw trad | 28.7 | 118 | 128 | 113 | 01/1 | . । ०ए | 20.5 | 58r: | 585 | 8753 | 23.3 | | |
| YEssura | 2.5 | 777 | 6.3 | 8.3 | 1.51 | . 7.9 . | 5.5 | 1.8 | रक | 1.9 | 5.3 | • | . 1 |
| Ancimony | • | | | | į. | 3.41 | | i | ĺ | . 1 | | | 154. |
| munlaulA | 1630 | 75.25 | 2 400 | 2350 | 275 | XE 9/4 | गर् | 55/7 | 577.70 | orut | 05/15 | | |
| | 1-5 | 7.5 | 8.5 | 4.5 | 55 | 4.5 | 8-5 | / | 7-5 | 77-5-10 | 51-5. | | ; t |

DATE SAHPLED SAHPLE NO. HATRIX - 5.. 1

SUMMARY OF SAMPLING DATA
METALS
PAN

4- 37041

7 40 77 30v4

DATE SAMPLED OCT. 19,1991 SAMPLE NO. MATRIX - 3...

| UNITS | 5-1 | . 5-2 | 5-3 | 5-4 | 2-5 | 5:7 | 5-8 | <u>, j-9</u> | 7-10 | 5-11 | 5-13 | | |
|----------|------|-------|-------|------|-------|------|------|--------------|------|-------|-------|---|-----|
| Selenium | | 13 | | | 2.5 | | | 1.8 | | | | | , |
| Silver | | | | · . | · · · | | | | j | | | | |
| odium | 1480 | 10 % | | 1020 | | | | : | 1 | | · | | • • |
| Challium | | | | 7545 | | | | | | | | | |
| anadium | 17:0 | 19.4 | 18.5 | 70.3 | 44.3 | 18.8 | | 21.7 | 12.4 | 17.3 | 24.8 | | |
| inc | · . | | . • • | | | | | | | İ | | | : |
| | 50.2 | 5410 | 7590 | 8270 | 13600 | 608 | 342 | 2500 | 1701 | 15240 | 10000 | | |
| Cyanida | 0.25 | 2.6 | 1.5 | 4.1 | 1.4 | 16 | 0.63 | 1.4 | 3.4 | 16.3 | 1/2.3 | 1 | |

Other

- U Indicates compound was analyzed for but not detected. The eample quantitation limit must be corrected for dilution and for percent moisture. For example, 10 U for phenol in water if the sample final volume is the protocol-specified final volume. If a 1 to 10 dilution of extract is necessary, the reported limit is 100 U. For a soil sample, the value must also be adjusted for percent moisture.
 - Indicates an estimated value. This flag is used either when astimating a concentration for tentatively identified compounds where a l:1 response is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero. For example, if the sample quantitation limit is 10 ug/L, but a concentration of 3 ug/L is calculated, report it as 3J. The sample quantitation limit must be adjusted for both dilution and percent moisture as discussed for the U flag, so that if a sample with 24Z moisture and a 1 to 10 dilution factor has a calculated concentration of 300 ug/L and a sample quantitation limit of 430 ug/kg, report the concentration as 300J on Form I.
- C This flag applies to pesticide results where the identification has been confirmed by GC/MS. Single component pesticides >10 mg/ul in the final extract shall be confirmed by GC/MS.
- This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action. This flag must be used for a TIC as well as for a positively identified TCL compound.
- This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis. This flag will not apply to pesticides/PCBs analyzed by GC/EC methods. If one or more compounds have a response greater than full scale, the sample or extract must be diluted and re-analyzed according to the specifications in Exhibit D. All such compounds with a rasponse greater than full scale should have the concentration flagged with an "2" on the form I for the original analysis. If the dilution of the extract causes any compounds identified in the first analysis to be below the calibration range in the second analysis, then the results of both analyses shall be reported on separate Forms I. The Form I for the diluted sample shall have the "DL" suffix appended to the sample number.
- D This flag identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor, as in the "E" flag above, the "DL" suffix is appended to the sample number on the Form I for the diluted sample, and all concentration values reported on that Form I are flagged with the "D" flag.
- A This flag indicates that a TIC is a suspected aldol-condensation product.

Under the columns labeled "C", "Q", and "H", enter result qualifiers as identified below. If additional qualifiers are used, their explicit definitions must be included on the Cover Page in the Comments section.

FORM I-IM includes fields for three types of result qualifiers. These qualifiers must be completed as fellows:

- G (Concentration) qualifier -- Enter "B" if the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CADL) but greater than or equal to the Instrument Detection Limit (IDL). If the analyte was analyzed for but not detected, a "U" must be entered.
- Q qualifier .. Specified entries and their meanings are as follows:
 - The reported value is estimated because of the presence of interference. An explanatory note must be included under Connects on the Cover Page (if the problem applies to all samples) or on the specific FORM I-IM (if it is an isolated problem)..
 - Duplicate Injection precision not met. ĸ
 - Spiked sample recovery. not within control limits.
 - The reported value was determined by the Method of Standard Additions (MSA).
 - Post-digestion spike for Purnace AA analysis is out of control limits (\$5-1154), While sample absorbance is less than 50% of spike absorbance. (See Exhibit E.)
 - Duplicate analysis not within control limits.
 - Correlation coefficient for the MSA is less than 0.995.

Intering "S", "W", or "+" is mutually exclusive. No combination of these qualifiers can appear in the same field for an analyte.

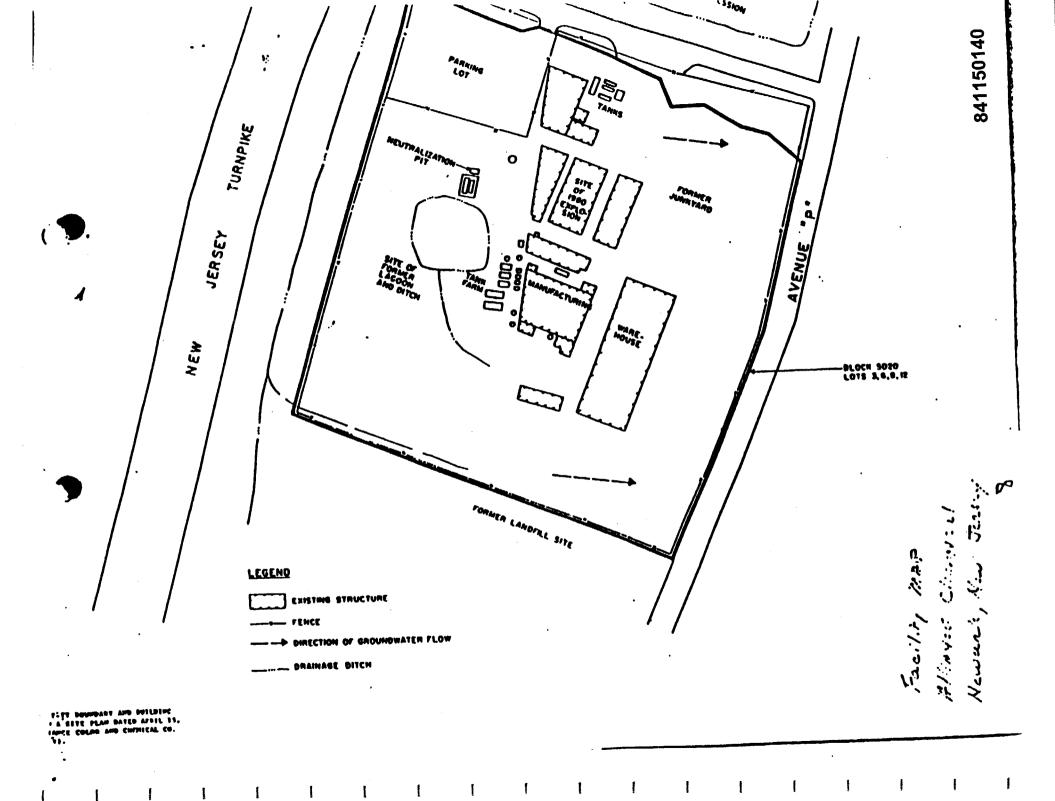
- M (Method) qualifier -- Enter:
 - "?" for ICP
 - "A" for Flame AA
 - "I" for Purnace AA
 - "GV" for Manual Cold Vapor AA .
 - "AT" for Automated Cold Vapor AA
 - "AS" for Semi-Automated Spectrophotometric
 - "G" for Manual Speatrophotometrie
 - "T" for Titrimetrie
 - "M" if the enelyte is not required to be analyzed.

A brief physical description of the sample, both before and after digestion, must be reported in the fields for color (before and after), clarity (before and after), texture and artifacts. For vater samples, report soler and clarity. For soil samples, report soler, texture and artifacts.

| SAMPLE TYPE/ NUMBER | BSA NUMBER | TIME | SAMPLERS | DESCRIPTION/LOCATION |
|---|----------------------------------|-----------|-------------|--|
| S.1 8 TCL130 PHC | 10199833 | 1205-1217 | C. Ho Istam | Collect at surface level from a Mound. The AREA WAS void of vojetation, Sample is described as a dank sand with an oily substance in it. The sample was collected west of building ET. |
| 5.1.5 TCL+30 | 10155834 | 1201-1215 | D. Multerd | Sample was collected at a depth of two feet in are void of by itation. The top one foot was a red co the second foot was black, and sandy with buildic debair mixed in Sample was collected. Sample was collected. Sample was collected was collected. |
| Jo.1-10- TCL+30 Vo's | 10199835 | 1225-1240 | O. Tozpey | Jample com collected at Juntace level. The sol was dunk, and only with amounts of gravel in. The sample haid—an organite odon. |
| 5.1.13(04p) 5.1.13(04p) TCL+30 Vo: | 101998 X 10799743 10199837 | 1225-1240 | C.HolsTeam | Samples were collected at a sunface level in an! Void of vegetation, on the South Side of the Site. The soil was dark and only with gold flexs mi in. |

1 1 1 1

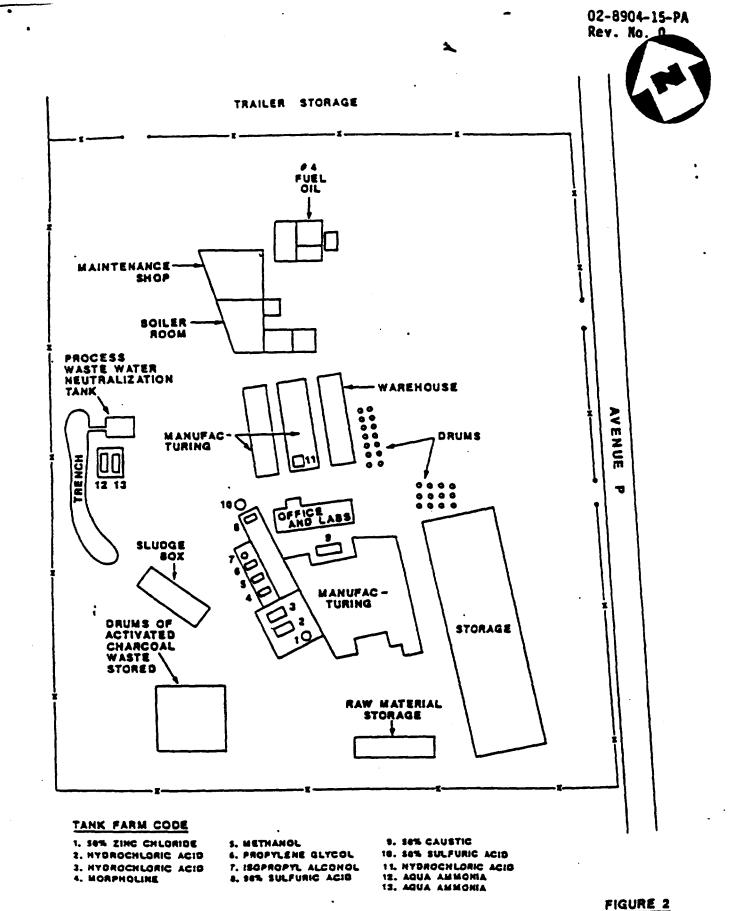
| SAMPLE TYPE/ NUMBER | BSA NUMBER | COLLECTED | Samplers | DESCRIPTION/LOCATION ! |
|------------------------|------------|-------------|------------|--|
| cl+30 | 10199 826 | 1037-1042 | | Collected at 3 inches and described as donk, sitty fill Soil, ARBA was void of wige Tutlow. Located at Northwest conven by fence |
| 1-2; CL+3 | 10155827 | 1059-1115 | D.Ma/RsG | Collected at a depth of six feet, in Described as donk silly, soil with plastic debais, and an bagnuic odos. The gar. is slyntly west and honth of Agua Promonital Stoney' In and is void of voy eta Tibu! |
| CL-930 | 10159828 | 1145-1120 | B. Barey | Collected at a depth of one to one and half leat. Described as Red Clay with Black streaks. The area is southwest of the Aqua Ammonia streage tunks, and has limited vigotions |
| cL+30 | 10197729 | 1167-1115 | K. K/00 | Collected at five fact. Passabled as dank, with places of Hobais and a Strong engante odon. Collected from an ance west of the Agua Ammonta TANK Near The fines line. |
| rcl. 430 Vo's' | 10/9930 | 1118-1125 | C. Holsham | Collected at Two and one half hat. Described as Black oity, sity Soil with a possible organic odon. Collected from an area west of the sewen collection Basin, with limited unetation. |
| 10.1-7 FCL +30 1 | 10199332 | //:57-12:1S | K. K/oo | Collected at a depth of four feet. Described as dank organic mercaled, mixed with fine gray sand and debais with a strong organic odor. Sample was collected in an anen of limited regetation south of the Sower collect |
| 841150139 | | | | busin. |



1/10/80 PFISTER - ALLIANCE CHEMICAL NEWARK, N.J.

| | | LAGOON | | |
|-----------|----------|-------------|---------------------------------------|--|
| | | | | |
| 00000 | | | : <u> </u> | |
| B | FIRE | 3 | | |
| | | | | |
| ALLIANCE | CHEMICAL | 69 , | | |
| | | | · · · · · · · · · · · · · · · · · · · | |
| | | | | |
| AYENUE P. | | | | |

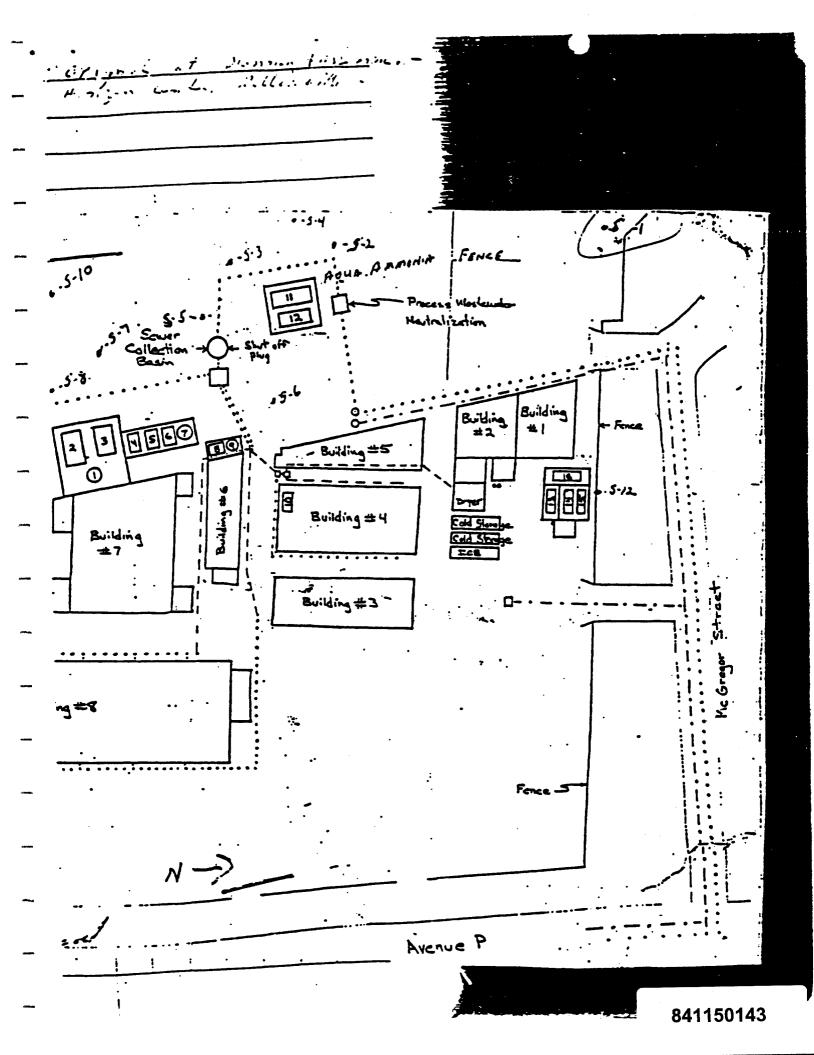
ATTACHMENT 2

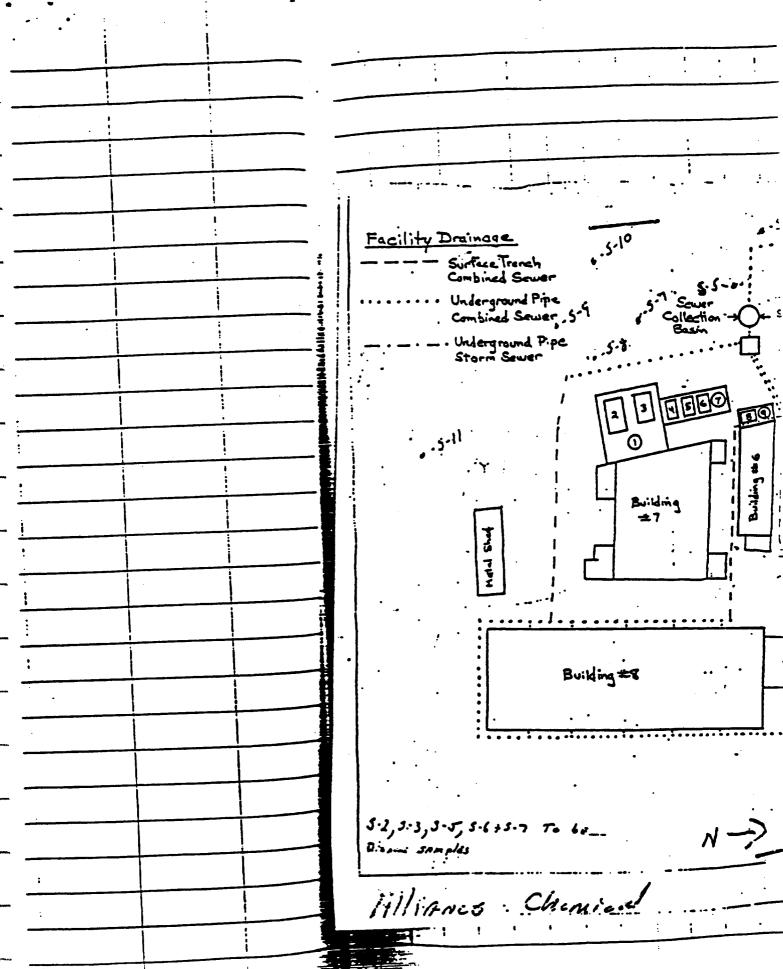


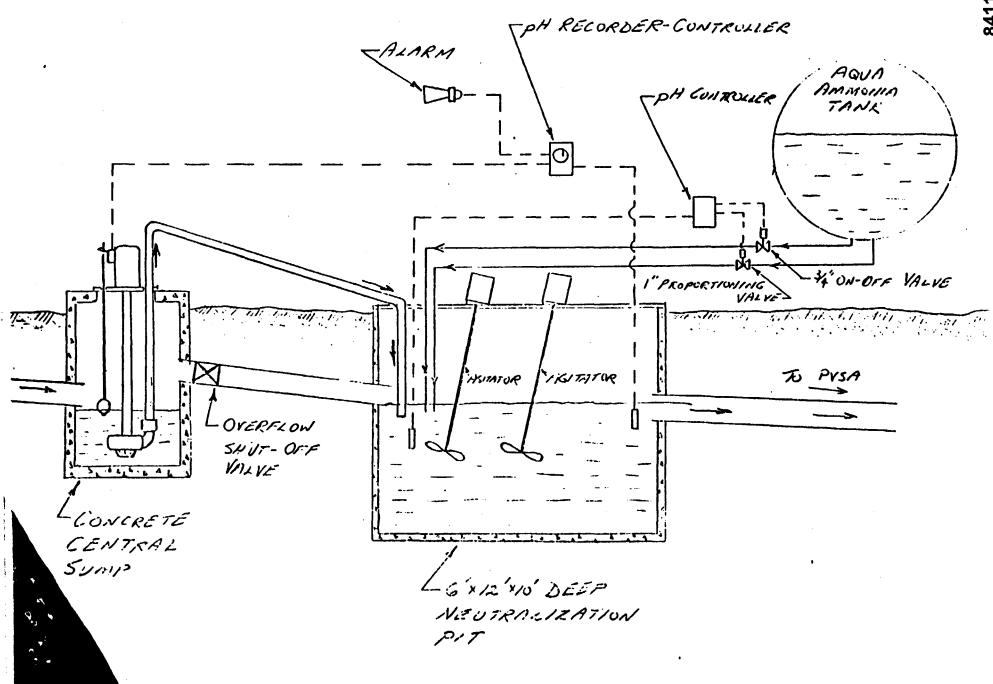
SITE MAP ALLIANCE CHEMICAL INC., NEWARK, N.J.

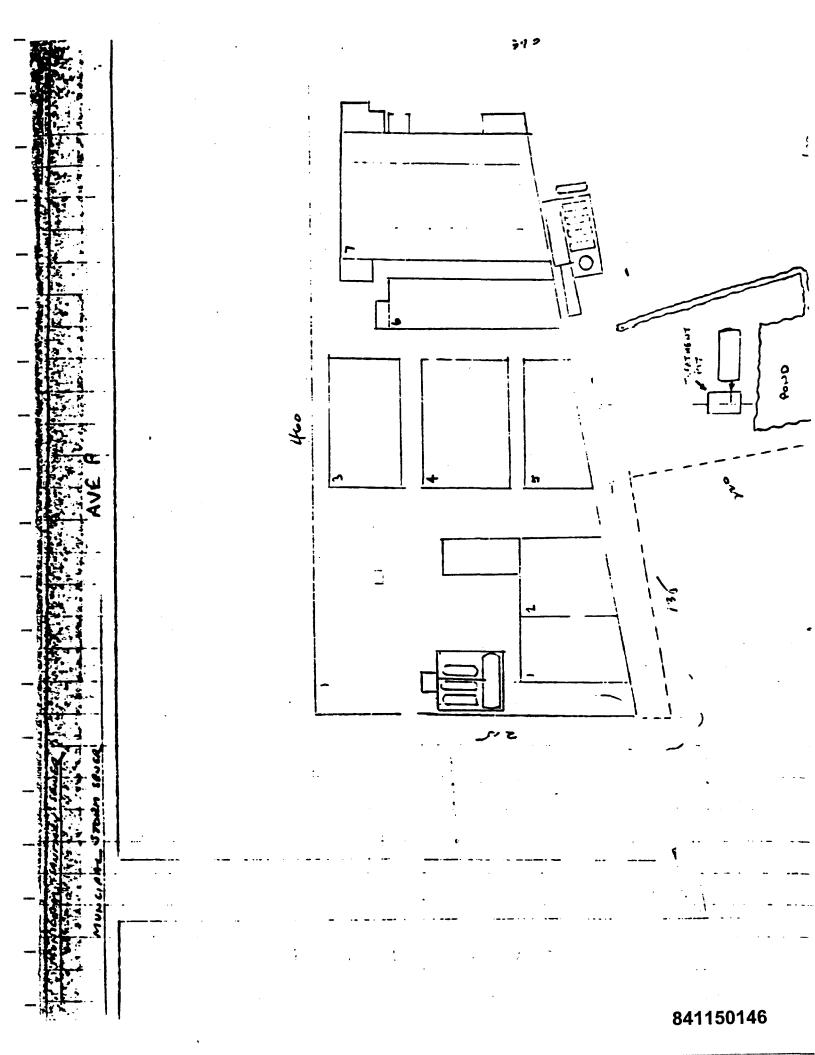
NOT TO SCALE











DEQ-094

State of New Jersey DEPARTMENT OF ENVIRONMENTAL PROTECTION



COMMUNITY RIGHT TO KNOW SURVEY FOR 1988

to satisfy requirements under SARA, Title III, Section 312 and New Jersey Community Right to Know

| NJEIN | SIC | COUNTY/MUNIC. | DUE DATE | | |
|------------------------------------|------------------------------|--|---------------------------------------|-------------------------------|--|
| | | | | | A separate survey must be completed for each facility. |
| | | | | , A FACILITY L | OCATION |
| 050000 | <u> </u> | 507148903 | 01 <u>-</u> | If the facility | location is different than the mailing |
| ALLIANO DETE | ÖĞ ÖLÜTMİ Ö. TER: OLUMNIC | J. 1910 M. 1 | | address on | the label, enter facility address below. |
| INC | edución de l'Officia | | | Alliance | Chemical, Inc. |
| ING DO | <u> </u> | .* | HERE | Alliance | |
| | 7 <u>55</u> 57 M () | 07007 | ñ | | |
| • | | | | Newark, N. | J 07105 |
| Indicate chang | ges to mailing | address on label | | Check here if y above address | you would like your survey mailed to |
| B Does this fa | acility use, sto | re, or produce any | hazardous n | naterials at quantities | Number of employees at facility: 32 |
| | | | | unity Right to Know | |
| Act or Sect tion Act? | ion 312, Title | _ | | nts and Reauthoriza | Number of facilities in New Jersey |
| | tions for report | ing thresholds) | Yes | _] No | F Dun and Bradstreet No. |
| O Briefly des | cribe the natu | re of the operation | s or busines | s conducted at this | 10 14 1 15 17 19 1 41 91 71 4 |
| | | rer of specia | | | G Check the box if a Research and |
| | · Flandlact | itel of specie | itty orga | inte chemicars | Development Exemption Claim is |
| | | | | | being made for any portion of this |
| | | | | | facility. |
| (H) CERTIFICA | ATION OF OV | NER/OPERATOR | OR AUTHO | RIZED REPRESEN | TATIVE — I certify under penalty of law |
| | | | | | ed in this document, and that based on |
| | | | | | elieve that the submitted information is |
| | ate, and comp | | | | |
| .* | / | 1. The Du | masor | | Phone 4-99 Number (201) 945-5400 |
| Signature Date Date | | | | | |
| Name (Print) Title | | | | | |
| | | | | | |
| | | 'ARTMENT — Ente e and fire departme | | | s, names and addresses (including Zip |
| POLICE DEP | • | · · · · · · · · · · · · · · · · · · · | , , , , , , , , , , , , , , , , , , , | FIRE DEPT. | Phone |
| FOLICE DEF | | 711 01 | | FIRE DEFT. | Number (201) 733 7400 |
| | | er (201_) _733_ | 5000 | · | 14011Der (|
| Name Nev | wark Polic | e Dept. | | | Fire Dept. |
| Address 64 | 49 Market | Street | | Address 1010 | 18th Avenue |
| | Newark, | Zip Code_ | 07105 | Municipality | vark Zip 07106 |
| () FACILITY | EMERGENCY | | | <u>!</u> | |
| 1 — | William | | | Title Plant | Manager |
| Name | | | 344 _ | | |
| Facility Ph | one Number | (202) 344 2 | E ₁ | nergency Contact F | hone Number (201) 945-6922 |
| NOTE: Mak | e coples of | this survey! Th | e law requi | es that you | Return original to: |
| send a copy | to your Coun | ty Lead Agency, Lo | cal Emerge | ncy Planning | RIGHT TO KNOW PROGRAM |
| 1 | • | police and fire depa | - | - | P.O. Box 401 |
| 4 | • | nmittee addresses ii | | , 1 | Trenton, NJ 08607 |
| 1000my ager | ing and local Co | | . manucions | | |
| FOR INTERNAL USE ONLY STAT FTS E F | | | | | |
| ATTACHMENT D-/2 | | | | | |
| 1/2 | | | ALIAC | TIMENT - /C | _ |

IMPORTANT! Read all instructions before completing. Photocopy this sheet, if you need additional forms.

| | Please print or type all responses. | | | |
|---------------------------------------|--|-----------------------------|---|--|
| | FACILITY IDENTIFICATION AND SITE LOCAT | ION | • | |
| NJEIN | | | Street Address | 309-327 Avenue P |
| Facility Name Alliance Chemical, Inc. | | | City Newark | State NJ Zip 07105 |
| | CHEMICAL DESCRIPTION | HAZARDS | Inventory (Ranges) | STORAGE CODES AND LOCATIONS |
| | Substance Name | (Enter for all that apply.) | (Enter Code) Max. Daily 13 Avg. Daily 13 Days Onsite 365 (Actual Number) | (Enter Codes, except Location(s); supply narrative.) Container 47 Conditions 01 04 Location(s) North Yard + Building |
| | CAS No. 64 - 19 - 7 DOT No. 27.49 Substance No. (if available) 0004 Percent 60 State Trade Secret (Code) (Code) (Check if Claiming) | <u></u> | Max. Daily 10 Avg. Daily 10 Days Onsite 270 (Actual Number) | Container 39 Conditions 01 04 Location(s) Lab |
| | Substance Name ACETONE. CAS No. 67 - 64 - DOT No. 1090 Substance No. (if available) 0006 Percent 60 State L Trade Secret (Code) (Code) (Check if Claiming) | 70, 69, 67. | Max. Daily 11 Avg. Daily 10 Days Onsile 365 (Actual Number) | Container 46 Conditions 01 04 Location(s) Lab |
| | Substance Name Amnonium Hyproxide CAS No. 1336 - 21 - 6 DOT No. 2672 Substance No. (if available) | 67 | Max. Daily 16 Avg. Daily 15 Days Onsile 365 (Actual Number) | Container 50 Conditions 01 09 Location(s) West yard |
| | Substance Name Hungwigh Hygrox IPE CAS No. 1336 - 21 - 6 DOT No. 2672 Substance No. (if available) | 67 | Max. Daily 10 Avg. Daily 10 Days Onsite 365 (Actual Number) | Container 39 Conditions 01 04 Location(s) Lab |
| | Substance Name n-buty Bromiec. CAS No. 104 - 65 - 9 DOT No. 1126 Substance No. (if available) 0283 Percent 59 State L Trade Secret (Code) (Code) (Check if Claiming) | 70 67 | Max. Daily 13 Avg. Daily 13 Days Onsile 365 (Actual Number) | Container 47 Conditions 01 04 Location(s) North Yard |
| | Substance Name n - Butyl Broming. CAS No. [09 - 65 - 9 DOT No. [126] Substance No. (if available) 03 83 Percent 59 State L Trade Secret [] (Code) (Code) (Check if Claiming) | 70.67 | Max. Daily 14 Avg. Daily 13 Days Onsile 365 (Actual Number) | Container 32 Conditions 01 04. Location(s) South yard |

IMPORTANT! Read all instructions before completing.
Photocopy this sheet, if you need additional forms.
Please print or type all responses.

FACILITY IDENTIFICATION AND SITE LOCATION

OS 1 9 6 2 00000

| | Street Address | 309-327 HVENUE P |
|---|--|---|
| NJEIN 05 18620000 | . 1 | CK State NJ Zip 07105 |
| Facility Name AlliANCE CHEMICAL INC | CityNEWAR | |
| • | ARDS Inventory (Ranges) | STORAGE CODES AND LOCATIONS |
| Substance Name Z-ETHOXYETHANOL (Enter for all the CAS No. 110-80-5 DOT No. 1171 70,67 Substance No. (if available) 0839 Percent 59 State L Trade Secret [(Code) (Code) (Check if Claiming) | 1 May Daily 14 | (Enter Codes, except Location(s); supply narrative.) Container 47 Conditions 0/ 04 Location(s) North yard, Building 4 |
| Substance Name 2 - ETHONY ETHANOL CAS No. (10 - 80 - 5 DOT No. H7 TO 67 Substance No. (if available) 0819 Percent 59 State L Trade Secret (Code) (Code) (Check if Claiming) | Max. Daily 10 Avg. Daily 10 Days Onsite 270 (Actual Number) | Container 39 Conditions 01 04 Location(s) Lat |
| Substance Name I-PIALU-4LN N-PINETHYLANINOBE NZENE U. CAS No. 1353 - 17 - O DOT No. 1325 Substance No. (if available) Percent 58 State Trade Secret (Code) (Code) (Check if Claiming) | May Daily (Z | Container 43 Conditions 01 06 Location(s) Made in building 4, then to cold Stornge, Building 3 |
| Substance Name - 0:1420 - 4 - NN - PIMETHYL ATIMO SENZENE CAS No. 13535 - 17 - 0 DOT No. 1325 70.65 Substance No. (if available) Percent 59 State 5 Trade Secret (Code) (Check if Claiming) | | Container 43 Conditions 01 06 Location(s) Cold Storage, Building |
| Substance Name 1-01420-4-pv, N-DIETHYLAMINOB ENZENE CLAS No. 6217-14-2 DOT No. 1325 70, 67 Substance No. (if available) Percent 5 9 State S Trade Secret (Code) (Code) (Check if Claiming) | | Container 43 Conditions 01 06 Location(s) Made in building 4 then to cold storage or building 3 |
| Substance Name -01AZO-4-N,N-PLETHYLATINGBEN ZENE (L. 2nd CAS No. 6217 - 19 - 2 DOT No. 1325 70, 60 Substance No. (if available) Percent 59 State 5 Trade Secret [Code) (Check if Claiming) | Max. Daily 13 Avg. Daily 12 Days Onsite 265 (Actual Number) | Container 43 Conditions 01 06 Location(s) cold stange, Building 3 |
| Substance Name 1-0:AZO-4-N/N-0:19ETHYLAMINO CAS No. 6023-44-5 DOT No. 1225 Substance No. (if available) Percent 58 State 5 Trade Secret [] (Code) (Check if Claiming) | ' May (\aib) \ | Container 43 Conditions 01 06 Location(s) Building #2 Dryer, Building #5 dryer, cold storage, Building 3 |

IMPORTANT! Read all instructions before completing. Photocopy this sheet, if you need additional forms. Please print or type all responses.

FACILITY IDENTIFICATION AND SITE LOCATION

| NJEIN05 2 86 2 00000 | Street Address 309-327 | AVENUE P |
|-------------------------------------|------------------------|--------------------|
| Facility Name ALLIANCE CHEMICAL INC | City NEWARK | State_NJ Zip_07105 |

| Facility Name | 1700 | City IVEWAK | State_147_Zip_07105 |
|---|---|------------------------------------|---|
| CHEMICAL DESCRIPTION | HAZARDS | Inventory (Ranges) | STORAGE CODES AND LOCATIONS |
| Substance Name 1-piazo-4-NN- MHETHYL AMIND CAS No. 6023-44-5 DOT No. 1325 | (Enter for all that apply.) BENZENE L. Z. U., 70, 67, | (Enter Code) Max. Daily 13 | (Enter Codes, except Location(s); supply narrative.) Container 43 Conditions 01 06 |
| Substance No. (if available) | | Avg. Daily 13 | Location(s) Building #2 drypr, Building |
| Percent 59 State 5 Trade Secret (Code) (Code) (Check if Claiming) | | Days Onsite_365 (Actual Number) | #5 dryer, cold stronge, Building #3 |
| Substance Name 1-01420-4-NN-018THYLAHIME CAS No. 5149-85-9 DOT No. 1325 | i ' | Max. Daily 13 | Container 43 Conditions 01 06 |
| Substance No. (if available) | 70.67. | Avg. Daily | Location(s) Made in Building #4 then to |
| Percent 5 8 State 5 Trade Secret | | Days Onsite 120 | cold stronge on Building #3 |
| (Code) (Code) (Check if Claiming) Substance Name 1-91420-4-NV-DIETHYL AHINDBEN | 2.2.1F V. 2 / | (Actual Number) | |
| CAS No. 5149 -85 - 9 DOT No. 1325 | 70.67, | Max. Daily 13 | Container 4.7 Conditions 01 06. |
| Substance No. (if available) | | Avg. Daily 13 | Location(s) cold storage, Building#3 |
| Percent 19 State 5 Trade Secret (Code) (Code) (Check if Claiming) | | Days Onsite 365 (Actual Number) | |
| Substance Name 1-71/fto-2,5-916/TOXY-4-MORPH | ULINU BENZENE ZZ 10 | (ACIDALIVOINOSI) | |
| CAS No. 14726 - 58 - 0 DOT No. 1325 | 70.67. | Max. Daily 13 | Container 43 Conditions of ob. |
| Substance No. (if available) | <u> </u> | Avg. Daily 13 | Location(s) Made in building #4 then |
| Percent 57 State 5 Trade Secret | | Days Onsite 120 (Actual Number) | to cold storage or Building #3 |
| Substance Name 1-DIAZO -Z, 5-DIBUTDXY-4-HOAPAOU | NOBENZENE Y 7. 7. 10. | (Actoba Hallott) | |
| CAS No. 14726-58- 0 DOT No. 1325 | | Max. Daily 13 | Container 43 Conditions 01 06 |
| Substance No. (if available) | 70.67 | Avg. Daily 13 | Location(s) and storage, Building#3 |
| Percent 59 State 5 Trade Secret | ' | Days Onsite 365 | |
| (Code) (Code) (Check if Claiming) Substance Name + PIP 20 - 2, 5 - DIBU TOXY - 4 - TI URPHOL | MORENZEME SORACI WALLE | (Actual Number) | |
| CAS No. 50543-78 - 7 DOT No. 1325 | ſ | Max. Daily 12 | Container 43 Conditions 01 06 |
| Substance No. (if available) | 70.67. | Avg. Daily 12 | Location(s) Made in trilding #4 ther |
| Percent 56 State S Trade Secret | ' | Days Onsite 45 | to cold storage or building #3 |
| (Code) (Check if Claiming) | To the first to the second | (Actual Number) | |
| CAS No. 6023 - 29 - 6 DOT No. 1325 | | Max. Daily 13 | Container 43 Conditions 01 06. |
| Substance No. (if available) | 70.67,, | Avg. Daily 13 | Location(s) Made in building #4 Then |
| Percent 58 State S Trade Secret | ' | Days Onsite 120 | to cold storage or Building #3 |
| (Code) (Check if Claiming) | | (Actual Number) | |

| EACH ITY | IDENTIFICATION | AND S | ITE L | OCATION |
|----------|----------------|-------|-------|---------|
| PACIFILL | | | | |

| FACILIT | Y IDENTIFICATION AND SITE LOCATION | | ZZZ Augang P |
|----------|------------------------------------|---------------------|--------------------|
| NJEIN | 05286200000 | Street Address 309- | 327 HVENUE P |
| Facility | Name ALLIANCE CHEMICAL INC. | City NEWARK | State NT Zip 07105 |
| | | | |

| Facility Name | _ INC. | City IVE WI | |
|---|-----------------------------|------------------------------------|--|
| CHEMICAL DESCRIPTION | HAZARDS | Inventory (Ranges) | STORAGE CODES AND LOCATIONS |
| C Labora Nama L 01070 - 7 C DIETHOXI - 4 - MORPHOL | (Enter for all that apply.) | (Enter Code) | (Enter Codes, except Location(s); supply narrative.) |
| | DEENZENE. 12 Zully | Max. Daily 13 | Container 43 Conditions 01 06 |
| CAS No. 6023 - 29 - 6 DOI No. 13 25 ^ | 70,67 | Avg. Daily 13 | Location(s) Building # 2 dryer, Building #5 |
| Substance No. (if available) | | Days Onsite 365 | dryer, cold storage, building #3 |
| Percent 59 State 5 Trade Secret | | (Actual Number) | |
| (Code) (Code) (Check if Claiming) | 0543546 1/2 1/1 | (Metod Helmer) | |
| Substance Name - 01820 - 2, 5 - 01ETHOW - 4 - 110 RPHOUNT | | Max. Daily 13 | Container 43 Conditions 01 06 |
| CAS No. 6021 - 29 - 6 DOT No. 1325 | 70.67 | Avg. Daily13 | Location(s) Building # 2 drypr, Building #5 |
| Substance No. (if available) | | | dryer, cold stronge, Building # 3 |
| Percent 57 State 5 Trade Secret | | Days Onsite 365 | aryer, consumpt , wanter, |
| (Code) (Code) (Check if Claiming) | | (Actual Number) | |
| Substance Name 1-DIALO -2, 5 - DIETHOXY -4 - MORPHULINU | BENSENE BOKO LLOKING | Mary B. 7. | Container 43 Conditions 01 06 |
| CAS No. 4979 - 72 0 DOT No. 1325 | 70.67 | Max. Daily 12 | Location(s) cold storage, Building #3 |
| Substance No. (if available) | | Avg. Daily 12 | Location(s) (Aid Started , Donate |
| Percent 59 State 5 Trade Secret | | Days Onsite_365 (Actual Number) | |
| (Code) (Code) (Check if Claiming) | | (ACTUAL INUITION) | |
| Substance Name DAZO - 2,5 - PIETHOLY -4- FORPHOUN | BENZENE BOROFLUORIDE | | Container 43 Conditions 0 06 |
| CAS No. 4979 - 72 - 0 DOT No. 1325 | 70.67,, | Max. Daily 12 | Container 47 Conditions 4 06 |
| Substance No. (if available) | | Avg. Daily <u>1고</u> | Location(s) Made in Building # 4, than |
| Percent 56 State S Trade Secret | | Days Onsile 365 | to cold storage or Building #3 |
| (Code) (Code) (Check if Claiming) | | (Actual Number) | |
| Substance Name 1-DIAZO- 4-N. N-DIETN/LAMINOBENZ | NEBORO FLUORIDE | | Container 43 Conditions 01 06 |
| CAS No. 347 - 46 - 6 DOT No. 1325 | 70, 67, | Max. Daily 12 | Container +> Conditions = |
| Substance No. (if available) | | Avg. Daily 12 | Location(s) Made in Building #4, then |
| Percent 56 State 5 Trade Secret . | | Days Onsite_20_ | to rold storage or Building #3 |
| (Code) (Code) (Check if Claiming) | i | (Actual Number) | · · |
| Substance Name 1-DIAZO - 3-METHYL-4-PYRROLIDING | BENZENG U, Znul | | Container 43 Conditions 01 06 |
| CAS No. 52572 38 - 0 DOT No. 1325 | 70 . 67 ,, | Max. Daily13 | Container Conditions 5. |
| Substance No. (if available) | | Avg. Daily 13 | Location(s) Made in Building #4 then |
| Percent 5 6 State 5 Trade Secret | | Days Onsite_45_ | to cold storage or Building #3 |
| (Code) (Code) (Check if Claiming) | | (Actual Number) | |
| Substance Name !- PIAZO-3-METHYL-4-PYRIOLIDINOBEN | ZENE U Zull | _ | Container 43 Conditions 01 06 |
| CAS No. 52 572 - 38 - 0 DOT No. 1325 | 70, 67,, | Max. Daily 13 | Container 43 Conditions 01 00 |
| Substance No. (if available) | | Avg. Daily /ユ | Location(s) Cold Storage, Building |
| Percent 59 State 5 Trade Secret 1 | | Days Onsite 365 | #3 |
| (Code) (Code) (Check if Claiming) | | (Actual Number) | |
| (COO) (COO) (CHECK II CHAITHING) | L | | |

Photocopy this sheet, if you need additional forms.
Please print or type all responses.

IMPORTANT! Read all instructions before completing.

Reporting Period: January 1 - December 31, 1988

| FACILITY IDENTIFICATION AND SITE LOCATION | <u>2N</u> | • | 309-327 AVENUE P |
|--|--|--|---|
| NJEIN 052862 00000 | | Street Address | |
| Facility Name ALLIANCE CHEMICAL | INC. | City NEWAR | K State NJ Zip 07105 |
| · · · · · · · · · · · · · · · · · · · | HAZARDS | Inventory (Ranges) | STORAGE CODES AND LOCATIONS |
| Substance No. (if available) Percent S8 State S Trade Secret S Trade Secret Percent S8 State S Trade Secret S Trade Secret S Trade Secret S Trade Secret S Trade Secret S Trade Secret S Trade Secret S Trade S | Enter for all that apply.) Anind Benzene 12 2 Ly 10,67,, | (Enter Code) Max. Daily 13 Avg. Daily 12 Days Onsite 365 (Actual Number) | (Enter Codes, except Location(s); supply narrative.) Container 43 Conditions 01 06 Location(s) Made in Building #4 Then to cold storage on Building #3 |
| (Code) (Code) (Check if Claiming) Substance Name 1-01820-4-LETHYL (2-HYDROXYET) CAS No. 14751 - 17 - 4 DOT No. 1325 Substance No. (if available) Percent 59 State S Trade Secret (Code) (Code) (Check if Claiming) | yr)aninggentene tizul 70 67,, | Max. Daily 12 Avg. Daily 12 Days Onsile 365 (Actual Number) | Container 43 Conditions 01 06 Location(s) cold strongs, Building#3 |
| Substance Name J-DIAZO -4-N,N-BITETHYLAMINOGE CAS No. 13533 - 17 - 0 DOT No. 1325 Substance No. (if available) Percent 59 State S Trade Secret | 70 , 67 , | Max. Daily 09 Avg. Daily 09 Days Onsile 365 (Actual Number) | Container 39 Conditions 01 06 Location(s) Lab |
| Substance Name PIAZO - Y - N. N - PIETHYL ATINOBE CAS No. 6217 - 19 - 2 DOT No. 1325 Substance No. (if available) Percent 59 State 5 Trade Secret | 70.67,, | Max. Daily 99 Avg. Daily 09 Days Onsile 365 (Actual Number) | Container 39 Conditions 01 06 Location(s) Lab |
| (Code) (Check if Claiming) Substance Name 1-91420-4-NN-014ETHY, AMINOBE CAS No. 6023-44-5 DOT No. 1325 Substance No. (if available) Percent 5 9 State S Trade Secret (Code) (Code) (Check if Claiming) | NZENP 12 20 Q4 | Max. Daily 09 Avg. Daily 09 Days Onsile 365 (Actual Number) | Container 39 Conditions 01 06 Location(s) Lab |
| Substance Name1-91420-4-NU-915TH/LAMINO BEN CAS No. 5149-85-9 DOT No. 1325 Substance No. (if available) Percent_59 State_5 Trade Secret [(Code) (Check if Claiming) | 70,67, | Max. Daily 09 Avg. Daily 09 Days Onsite 365 (Actual Number) | Container 39 Conditions 01 06 Location(s) Lab |
| Substance Name - DIAZO - Z, S - DIBUTOLY - 4 - MORPH O CAS No. 14726 - S8 - O DOT No. (325) Substance No. (if available) Percent 59 State S Trade Secret (Code) (Code) (Check if Claiming) | 70,67,, | Max. Daily 09 Avg. Daily 09 Days Onsile 365 (Adval Number) | Container 39 Conditions 01 06 Location(s) 4ab |

Reporting Period: January 1 - December 31, 1988

| FACILITY | IDENTIFICATION | AND | SITE | LOCATION |
|----------|----------------|-----|------|----------|
| | | | | |

| NJEIN 052862 00000 | Street Address 309-327 | AVENUE P |
|--------------------------------------|------------------------|--------------------|
| Facility Name ALLIANCE CHEMICAL INC. | City NEWARK | State NT Zip 07105 |

| Facility Name HLLIANCE CHEMICAL | <u> / NC.</u> | City NEWAR | State NT Zip 07105 |
|--|-----------------------------|--------------------|--|
| CHEMICAL DESCRIPTION | HAZARDS | Inventory (Ranges) | STORAGE CODES AND LOCATIONS |
| Substance Name 1-1/1020-2, 5- DIDUTOLY-4-HORPHOLING BEN | (Enter for all that apply.) | (Enter Code) | (Enter Codes, except Location(s); supply narrative.) |
| CAS No. 50543-78-7 DOT No. 1325 | ZENERURO FLUORIDE. | Max. Daily 09 | Container 39 Conditions 01 06 |
| Substance No. (if available) | 70 . 67 | Avg. Daily 09 | Location(s) Lab |
| Percent 59 State S Trade Secret | | Days Onsile 365 | |
| (Code) (Code) (Check if Claiming) | | (Actual Number) | ` |
| Substance Name 1-01420-2,5-9180TOXY-4-NOA11011NOB | ENZENEBURFLUORIDE | | / 7 : / |
| CAS No. 50543 - 78 - 7 DOT No. 1325 | 70,67, | Max. Daily 12 | Container 4-3 Conditions 01 06 |
| Substance No. (if available) | | Avg. Daily 12 | Location(s) cold storage, Building#3 |
| Percent 59 State 5 Trade Secret | | Days Onsite 30 | |
| (Code) (Code) (Check if Claiming) | j | (Actual Number) | |
| Substance Name 1-914-20-2,5-01ETHOLY-4-MORPHOLINO | BENZENE 12 Zuly | | |
| CAS No. 6023 - 29 - 6 DOT'No. 1325 | 70,67, | Max. Daily oq | Container 39 Conditions 01 06 |
| Substance No. (if available) | | Avg. Daily 09 | Location(s) <u>Lab</u> |
| Percent 59 State 5 Trade Secret | ' | Days Onsite 365 | |
| (Code) (Code) (Check if Claiming) | | (Actual Number) | |
| Substance Name 1-1920-25-DETHORY-4-HORPHULINO CAS No. 6025 - 29 - 6 DOT No. 1325 | BENZENE. EZulu. | | 3. |
| CAS No. 6023 - 29 - 6 DOT No. 1325 | 70.67. | Max. Daily og | Container 39 Conditions 01 06 |
| Substance No. (if available) | | Avg. Daily 09 | Location(s) Lob |
| Percent S State S Trade Secret | | Days Onsite 365 | |
| (Code) (Check if Claiming) | | (Actual Number) | |
| Substance Name 1-DIAZU-2, 5-DIBTHOLY-4-HORPHOL | INUBENTEL'E BURDE LUORID | | 10 |
| CAS No. 4979-72-0 DOT No. 1325 | 70,67. | Max. Daily 09 | Container 39 Conditions 01 06 |
| Substance No. (if available) | | Avg. Daily 09 | Location(s) Lab |
| Percent 59 State 5 Trade Secret | · · · · · · | Days Onsite 365 | |
| (Code) (Check if Claiming) | | (Actual Number) | |
| Substance Name 1-01120-4-N, N-01ETHYL AMIMO | BENZENE BOROFL VORIOE | | 47 0 111 - 01 04 |
| CAS No. 347 -46 - L DOT No. 1325 | 70,67, | Max. Daily 12 | Container 43 Conditions 01 06 |
| Substance No. (if available) | | Avg. Daily 12 | Location(s) coll storage, Building#3 |
| Percent 59 State 5 Trade Secret | | Days Onsite 90 | |
| (Code) (Code) (Check if Claiming) | | (Actual Number) | |
| Substance Name 1- PIAZO-4-N, N-DIETHYLANINOBEN | 1 | Man Dally an | 70 00000 01 06 |
| CAS No. 3 47 - 46 - 6 DOT No. 1325 | 70·, 67, | Max. Daily 09 | Container 39 Conditions 01 06 |
| Substance No. (if available) | | Avg. Daily 09 | Location(s) <u>Lab</u> |
| Percent 59 State S Trade Secret | | Days Onsite_365 | |
| (Code) (Check if Claiming) | | (Actual Number) | |

ATTACHMENT /

Photocopy this sheet, if you need additional forms.
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IMPORTANT! Read all instructions before completing.

Reporting Period: January 1 - December 31, 1988

| FACILITY IDENTIFICATION AND SITE LOCATI | <u>ON</u> | 5 | 309-327 HVENUE P. |
|--|--|---|---|
| NJEIN 05 2 86 2 00000 | | Street Address | |
| Facility Name ALLIANCE CHEMICAL | NC | City IVEWAR | K State N J Zip 07105 |
| CHEMICAL DESCRIPTION | HAZARDS | Inventory (Ranges) | STORAGE CODES AND LOCATIONS |
| Substance Name 1-01420-3-METHYL-4-PYFROLIDING CAS No. 52572-38-0 DOT No. 1325 Substance No. (if available) Percent 59 State 5 Trade Secret | (Enter for all that apply.) BENZENE (L. Z. (L. 70, 67, | (Enter Code) Max. Daily 09 Avg. Daily 09 Days Onsile 365 (Actual Number) | (Enter Codes, except Location(s); supply narrative.) Container 3 9 Conditions 01 06 Location(s) Lab |
| (Code) (Code) (Check if Claiming) Substance Name 1-DIAZO - 4-[ETITIC (2-HYDROLYETHYC) CAS No. 14751 - 97 - 4 DOT No. 13 25 Substance No. (if available) Percent 59 State 5 Trade Secret [[(Code) (Check if Claiming) | 70 , 67 | Max. Daily 09 Avg. Daily 09 Days Onsite 365 (Actual Number) | Container 39 Conditions 01 06 Location(s) 6 |
| Code) (Code) (Check if Claiming) Substance Name 2,5-plubphohnic in Fig. Substance No. (if available) Percent 59 State 5 Trade Secret (Code) (Code) (Check if Claiming) | <u>67 , </u> | Max. Daily 13 Avg. Daily 13 Days Onsite 30 (Actual Number) | Container 47 Conditions 01 04 Location(s) North yard, South yard Building #4, Building #8 |
| Substance Name N, N-DIETH TEANILINE CAS No. 9(- 16 - 7 DOT No Substance No. (if available) 0193 Percent 5 9 State L Trade Secret [(Code) (Code) (Check if Claiming) | <u>70 .67, </u> | Max. Daily 14 Avg. Daily 13 Days Onsite 365 (Actual Number) | Container 47 Conditions 01 04 Location(s) North yard, South yard Building #4, Building #8 |
| Substance Name NIN - DIETHYLANILINE CAS No. 91 - 61 - 7 DOT No. Substance No. (if available) 0 693 Percent 5 9 State L Trade Secret (Code) (Code) (Check if Claiming) | <u>70 . 67 </u> | Max. Daily 10 Avg. Daily 09 Days Onsile 365 (Actual Number) | Container 59 Conditions 01 04. Location(s) Lab |
| Substance Name DIETHYL SULPATE CAS No. 64 - 67 - 5 DOT No. Substance No. (if available) 0710 Percent 59 State L Trade Secret [] (Code) (Code) (Check if Claiming) | 67 | Max. Daily 14 Avg. Daily 14 Days Onsile 365 (Actual Number) | Container 47 Conditions 01 04 Location(s) North yard, South yard Building #4, Building #8 |
| Substance Name DIETHYL SULFATE. CAS No. 64-67-5 DOT No. Substance No. (if available) 0710 Percent S State L Trade Secret (Code) (Code) (Check if Claiming) | <u>67,</u> , | Max. Daily 10 Avg. Daily 09 Days Onsite 365 (Actual Number) | Container 39 Conditions 01 04 Location(s) 64 |

Reporting Period: January 1 - December 31, 1988

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841150156

FACILITY IDENTIFICATION AND SITE LOCATION

| FACILITY IDE | NTIFICATION AND SITE LOCATION | _ | - A |
|---------------|-------------------------------|--------------------|--------------------|
| NJEIN | 052862 00000 | Street Address 309 | -327 AVENUE P |
| | <u> </u> | City Newark | State NJ Zip 07105 |
| Facility Name | ALLIANIE CHEMICAL INC | City 14 Por 17 CT | |

| Facility Name HLUIFNIE CARMICAL | 1100 | Ony | |
|---|-----------------------------|---------------------|--|
| | HAZARDS | Inventory (Ranges) | STORAGE CODES AND LOCATIONS |
| CHEMICAL DESCRIPTION | (Enter for all that apply.) | (Enter Code) | (Enter Codes, except Location(s); supply narrative.) |
| Substance Name N. N- SINETHYL ANILINE | ľ | Max. Daily 14 | Container 47 Conditions 01 04 |
| CAS No. 121 - 69 - 7 DOT No. 1993 Substance No. (if available) 0741 | 70.67. | Avg. Daily 13 | Location(s) Horth yard, South yard, |
| | <u> </u> | Days Onsite 36.5 | Building #4, Building #8 |
| Percent_59 State L Trade Secret [| | (Actual Number) | |
| (Code) (Code) (Check if Claiming) | | | |
| Substance Name N N- OIMETHYLANILINE | 1- | Max. Daily 10 | Container 39 Conditions 01 04 |
| CAS No. 121 - 69 - 7 DOT No. 1443 | 70,67,, | Avg. Daily 09 | Location(s) Lab |
| Substance No. (if available) 0741 | | Days Onsite 365 | |
| Percent Sq State L Trade Secret | _ | (Actual Number) | |
| (Code) (Code) (Check if Claiming) | | 1,1010-1111111111 | |
| Substance Name N, N-DIMETHYL FORMAMIDE. | | Max. Daily 13 | Container 47 Conditions 01 04 |
| CAS No. 68 - 12 - 2 DOT No. 1943 | 70.67 | Avg. Daily 13 | Location(s) North yard, South yard, |
| Substance No. (if available) 0759 | | Days Onsite 365 | Building #4 |
| Percent 60 State L Trade Secret | 1 | (Actual Number) | |
| (Code) (Code) (Check if Claiming) | <u> </u> | // CLOSS / Common / | |
| Substance Name N. N-DIMETHYL FORMANDE | | Max. Daily 10 | Container 39 Conditions 01 04 |
| CAS No. 68 - 12 - 2 DOT No. 1943 | <u>70.67,</u> , | Avg. Daily 10 | Location(s) Lab |
| Substance No. (if available) 0 75 9 | | Days Onsite 365 | Location(3) Lab |
| Percent 60 State L Trade Secret | | (Actual Number) | |
| (Code) (Code) (Check if Claiming) | | (Action (Various) | |
| Substance Name 2 4 - DINITED CHURO BENZEN | | Max. Daily 14 | Container 47 Conditions 01 04 |
| CAS No. 97 - 00 - 7 DOT No. | 67 | Avg. Daily 14 | Location(s) South yard |
| Substance No. (if available) | | Days Onsite 365 | Location(s) 2001 4 9ut 1 |
| Percent 59 State 5 Trade Secret | | (Actual Number) | |
| (Code) (Code) (Check if Claiming) | | (ACIDAL (VOITIGE)) | |
| Substance Name 2, 4-01MTROCHLOROBENZENE | 1 | Max. Daily 10 | Container 38 Conditions 01 04 |
| CAS No. 97 - 00 - 7 DOT No | 67 | Avg. Daily 09 | Location(s) / at |
| Substance No. (if available) | _ • | Days Onsite 366 | 200411011(4) |
| Percent_59 State_S Trade Secret | | (Actual Number) | |
| (Code) (Code) (Check if Claiming) | | (Actual Homost) | |
| Substance Name DIPHENYLAMINE | | Max. Daily13 | Container 42 Conditions 01 04 |
| CAS No. 122 - 39 - 4 DOT No. | <u>67</u> ,, | Avg. Daily | Location(s) Resilding #8 |
| Substance No. (if available) | | Days Onsite7_ | Loudion(o) |
| Percent 59 State 5 Trade Secret | | (Actual Number) | |
| (Code) (Code) (Check if Claiming) | 1 | (MCIVIII INVIIION) | |

IMPORTANT! Read all instructions before completing.
Photocopy this sheet, if you need additional forms.
Please print or type all responses.

FACILITY IDENTIFICATION AND SITE LOCATION

| FACILITY IDENT | IFICATION AND S | ITE LOCATION | 1 | • | 200 227 | AVENUE | $\boldsymbol{\rho}$ |
|----------------|-----------------|--------------|-----|----------------|------------|--------------|---------------------|
| NJEIN | 052862 | 00000 | | Street Address | 309-327 | | |
| Facility Name | ALLIANCE | CHEMICAL | INC | City Newar | <u>K</u> S | tate NJ Zip_ | 07105 |

| 1 401111 | | (Deces) | STORAGE CODES AND LOCATIONS |
|--|-----------------------------|------------------------------------|--|
| CHEMICAL DESCRIPTION | HAZARDS | Inventory (Ranges) (Enter Code) | (Enter Codes, except Location(s); supply narrative.) |
| Substance Name ETHANOL | (Enter for all that apply.) | Max. Daily 12 | Container 47 Conditions 01 04 |
| CAS No. 64 - 17 - 5 DOT No. 1170 | 70,67,66 | Avg. Daily 12 | Location(s) North yard, Building4 |
| Substance No. (if available) 0844 | 69. | Days Onsite 30_ | 9 |
| Percent 59 State L Trade Secret | | (Actual Number) | |
| (Code) (Code) (Check if Claiming) | | (ACTUAL PROMOGY) | |
| Substance Name ETHRNOL | 1 | Mary Doily 40 | Container 39 Conditions 01 04 |
| CAS No. 64 - 17 - 5 DOT No. 1170 | <u>70.67.66</u> . | Max. Daily 10 | Location(s) Lab |
| Substance No. (if available) 0844 | 49 | Avg. Daily 09 | Location(s) |
| Percent 5 9 State Trade Secret [| <u> </u> | Days Onsite 365 | |
| (Code) (Code) (Check if Claiming) | <u> </u> | (Actual Number) | |
| Substance Name &- [ETHYL -(2-HY OROXYETHYL A | MINOJANILINE. | 1. 2.7. /5 | Container 47 Conditions 01 04 |
| CAS No. 92'-65-9 DOT No | 67 | Max. Daily | Container 1/ Conditions |
| Substance No. (if available) | <u> </u> | Avg. Daily 12 | Location(s) North yard, Building#4 |
| Percent 59 State L Trade Secret | | Days Onsite 45 | |
| (Code) (Code) (Check if Claiming) | | (Actual Number) | |
| Substance Name ISOPPOPYL ALCOHOL | | | Container 39 Conditions 01 04 |
| CAS No. 67 - 63 - 0 DOT No. 1219. | 70.69.67. | Max. Daily <u> </u> | |
| Substance No. (if available) 1076 | | Avg. Daily # 09 | Location(s) Lab |
| Percent 59 State L Trade Secret | | Days Onsile 365 | |
| (Code) (Code) (Check if Claiming) | | (Actual Number) | |
| Substance Name Icopropyu Aucohou | | | Container 50 Conditions 01 04 |
| CAS No. 67 - 63 - 0 DOT No. 1219. | .70 69 ;67 | Max. Daily 14 | |
| Substance No. (if available) | | Avg. Baily 14 | Location(s) West yard |
| Percent 59 State L Trade Secret | · | Days Onsite 365 | |
| (Code) (Code) (Check if Claiming) | | (Actual Number) | |
| Substance Name SOPROPYL ALCOHOL | | | Container 47 Conditions 01 04 |
| CAS No. 67 - 63 - 0 DOT No. 1219 | 70.69.67. | Max. Daily 13 | Container 47 Conditions 07 07 |
| Substance No. (if available) 1076 | 10.01.01 | Avg. Daily 13 | Location(s) North yard, Building # 4 |
| Percent 59 State L Trade Secret | | Days Onsite_30_ | |
| (Code) (Code) (Check if Claiming) | | (Actual Number) | |
| Substance Name PROPANE | | | Container 40 Conditions 02 04 |
| CAS No. 74 - 48 - 6 DOT No. 1075 | 70.69.67. | Max. Daily 12 | Container 40 Conditions 52 |
| Substance No. (if available) 1594 | <u></u> , <u></u> , | Avg. Daily <u>/ 고</u> | Location(s) Building #3, Fork 1: F+ |
| Percent 60 State G Trade Secret | | Days Onsite 365 | trucks, East of Building #2 |
| (Code) (Code) (Check if Claiming) | [| (Actual Number) | |

Reporting Period: January 1 - December 31, 1988

| FACILITY | IDENTIFICATION | AND | SITE | LOCATION |
|----------|----------------|-----|------|----------|
| | | | | |

| NJEIN | 052862 00000 | Street Address 309-327 | AVENUE P. |
|---------------|-----------------------|------------------------|--------------------|
| Facility Name | ALLIANCE CHEMICAL INC | City NEWARK | State_NJ Zip 07105 |

| • • | Citty Wallo | | Only Type Office Control of the Cont | | | |
|--|---|-----------------------------|--|--|--|--|
| | CHEMICAL DESCRIPTION | HAZARDS | Inventory (Ranges) | STORAGE CODES AND LOCATIONS | | |
| S | Substance Name MAGNESIUM SULFATE | (Enter for all that apply.) | (Enter Code) | (Enter Codes, except Location(s); supply narrative.) | | |
| | AS No. 7487 - 88 - 9 DOT No. | 67 | Max. Daily 14 | Container 42 Conditions 01 04 | | |
| ′ S | ubstance No. (if available) | | Avg. Daily 14 | Location(s) Building #4, Building #8 | | |
| P | ercent 60 State S Trade Secret | | Days Onsite_365 | | | |
| | Code) (Code) (Check if Claiming) | <u> </u> | (Actual Number) | ` | | |
| | Substance Name MAGNESTUM SULFATE | | | -à \ | | |
| 10 | CAS No. 7487 - 28 - 9 DOT No. | 67 | Max. Daily 10 | Container 38 Conditions 01 04 | | |
| 5 | Substance No. (if available) | | Avg. Daily | Location(s) Lab | | |
| | Percent 60 State 5 Trade Secret | | Days Onsite_365_ | | | |
| | Code) (Code) (Check if Claiming) | • | (Actual Number) | | | |
| | ubstance Name METHANOL | | | | | |
| | AS No. 67 - 56 - 1 DOT No. 12 30 | 70.69.67. | Max. Daily 14 | Container <u>SO</u> Conditions <u>01</u> <u>04</u> | | |
| | ubstance No. (if available) | | Avg. Daily 14 | Location(s) West yard | | |
| | ercent 59 State L Trade Secret | | Days Onsite_365_ | | | |
| ــــــــــــــــــــــــــــــــــــــ | Code) (Code) (Check if Claiming) | | (Actual Number) | | | |
| S | ubstance Name METHANOL | | | <i>t.</i> - | | |
| | AS No. 67 - 56 - DOT No. 1230 | <u>70,69,67,</u> | Max. Daily 13 | Container 47 Conditions 01 04 | | |
| | ubstance No. (il available) 1222 | | Avg. Daily 13 | Location(s) Building #4 | | |
| | ercent_59 State_L Trade Secret | | Days Onsite 365 | | | |
| | Code) (Code) (Check if Claiming) | | (Actual Number) | | | |
| S | ubstance Name METHANOL | | | 20 04 04 | | |
| | AS No. 67 -56 - 1 DOT No. 1230. | 70 69 , 67 | Max. Daily 10 | Container 39 Conditions 01 04 | | |
| 1 34 | ubstance No. (if available) 1222 | | Avg. Daily 09 | Location(s) Lab | | |
| | ercent_59 State_L_ Trade Secret [| | Days Onsite_365 | | | |
| | ode) (Code) (Check if Claiming) | | (Actual Number) | | | |
| | Ibstance Name MORPHOLINE | 1 | | 0.13.50 | | |
| | AS No. 110 - 91 - 8 DOT No. 2054 | 70.67. | Max. Daily 14 | Container 50 Conditions 01 04 | | |
| 30 | bstance No. (if available) | | Avg. Daily 14 | Location(s) West yard | | |
| 1 6 | ercent_S9_State_LTrade Secret ode) (Code) (Check if Claiming) | | Days Onsite 365 | | | |
| | | | (Actual Number) | | | |
| | AS NO U.O. 91 - 9 DOT No. 305" | | May Daily 12 | Container 47 Conditions 01 04 | | |
| S | AS No. 110 - 91 - 8 DOT No. 2054 bstance No. (if available) | 70.67 | Max. Daily 13 | Container 7 / Conditions 1 | | |
| Pa | ercent Sq State L Trade Secret | | Avg. Daily 13 | Location(s) Building #4, Building #5 | | |
| | | | Days Onsite 365 | South yard | | |
| L14 | ode) (Code) (Check if Claiming) | | (Actual Number) | | | |

IMPORTANT! Read all instructions before completing. Photocopy this sheet, if you need additional forms. Please print or type all responses.

FACILITY IDENTIFICATION AND SITE LOCATION

| NJEIN052862 00000 | Street Address 309-327 AVENUE P | |
|--------------------------------------|---------------------------------|---|
| Facility Name ALLIANCE CHEMICAL (NC. | City NEWARK State NJ Zip 07105 | _ |

| CHEMICAL DESCRIPTION | HAZARDS | Inventory (Ranges) | STORAGE CODES AND LOCATIONS |
|--|-----------------------------|-------------------------------------|--|
| Substance Name Margholine | (Enter for all that apply.) | (Enter Code) | (Enter Codes, except Location(s); supply narrative.) |
| CAS No. 110 - 91 - 8 DOT No. 2054 | 70,67. | Max. Daily 10 | Container 39 Conditions 01 04 |
| Substance No. (if available) | | Avg. Daily 09 | Location(s) Lob |
| Percent 59 State L Trade Secret | | Days Onsite 365 | · |
| (Code) (Code) (Check if Claiming) | <u> </u> | (Actual Number) | |
| Substance Name Hyprocheoric Acid. CAS No. 7647 - 01 - 0 DOT No. 1789 | . 7 | Max. Daily 16 | Container 50 Conditions 01 04 |
| Substance No. (if available) 1012 | <u>67</u> ,, | Avg. Daily 15 | Location(s) West yard |
| Percent 5 4 State L Trade Secret | | Days Onsite 365 | 100000 |
| (Code) (Code) (Check if Claiming) | | (Actual Number) | |
| Substance Name Hyprochloric Acip | | | 17 |
| CAS No. 7647 - 61 - 0 DOT No. 1789 | <u>67</u> | Max. Daily 12 | Container 47 Conditions 01 04 |
| Substance No. (if available) (012 | | Avg. Daily 12 | Location(s) Building 4 |
| Percent 54 State L Trade Secret C | | Days Onsite_60 | |
| (Code) (Check if Claiming) | | (Actual Number) | |
| Substance Name Hyprochloric Help CAS No. 7647 - 01 - 0 DOT No. 1789 | _ | Man Daile | 78 0/ |
| Substance No. (if available) | <u>67</u> | Max. Daily 1 | Container 38 Conditions 01 04 |
| Percent Strate L Trade Secret | | Avg. Daily 10 | Location(s) Lab |
| (Code) (Code) (Check if Claiming) | | Days Onsite_365_ (Actual Number) | |
| | | (Actual Number) | <u></u> |
| Substance Name PROPYLENE GLYLOL CAS No. 57 - 55 - 6 DOT No. | | May Daily 111 | 0 |
| Substance No. (if available) | <u>67. ;</u> | Max. Daily 14 Avg. Daily 13 | Container 50 Conditions 01 04 |
| Percent 60 State L Trade Secret | | Days Onsite 365 | Location(s) West yard |
| (Code) (Code) (Check if Claiming) | | (Actual Number) | * |
| Substance Name TROPYLENE YLYLOL | | (ACIDAL POINTOET) | |
| CAS No. 57 - 55 - 6 DOT No. | 17 | Max. Daily 13 | Container 47 Conditions 01 04 |
| Substance No. (if available) | <u>67.</u> | Avg. Daily 13 | Location(s) North yard, South yard, |
| Percent 60 State _ Trade Secret | | Days Onsite 270 | Building the |
| (Code) (Check if Claiming) | | (Actual Number) | Building #4 |
| Substance Name Penevi FNE GUNCOL | | p.10.02.112.1120.17 | |
| CAS No. 57 -55 - 6 DOT No. | 17 | Max. Daily 10 | Container 38 Conditions 01 04 |
| Substance No. (if available) | 67 | Avg. Daily 10 | Location(s) 6ab |
| Percent 60 State L Trade Secret | | Days Onsite 365 | Edoguarijaj Edo |
| (Code) (Check if Claiming) | | (Actual Number) | |
| | | <u> </u> | |

ATTACHMENT P

FACILITY IDENTIFICATION AND SITE LOCATION

| Please print of type an tope the | 0 |
|---|---------------------------------|
| FACILITY IDENTIFICATION AND SITE LOCATION | Street Address 309-327 HVENUE F |
| NJEIN05286200000 | City NEWARK State NJ. Zip 07105 |
| Facility Name ALLIANCE CHEMICAL INC. | STORAGE CODES AND LOCATIONS |

| NJEIN | lace | City NEWARK | |
|--|--|---|---|
| Facility Name ALLIANCE CHEMICAL | | | STORAGE CODES AND LOCATIONS |
| CHEMICAL DESCRIPTION Substance Name | HAZARDS (Enter for all that apply.) 70, | Inventory (Ranges) (Enter Code) Max. Daily | (Enter Codes, except Location(s); supply narrative.) Container 47 Conditions 01 04 Location(s) North Yard |
| (Code) (Code) (Check & Claiming) Substance Name | <u>67</u> , | Max. Daily 15 Avg. Daily 14 Days Onsile 365 (Actual Number) | Container 50 Conditions 01 04 Location(s) West yard |
| Code Code Check if Claiming | <u>67</u> . | Max. Daily | Container 47 Conditions 01 04 Location(s) Building #4 |
| (Code) (Check it Claiming) | | Max. Daily 13 Avg. Daily 13 Days Onsile 365 (Actual Number) | Container 47 Conditions 01 04 Location(s) Building #4 |
| (Code) (Code) (Check if Claiming) Substance Name Sopium Nitratia CAS No. 7632 - 00 - 0 DOT No. 1500 Substance No. (if available) Percent 60 State S Trade Secret | 70 . 67 | Max. Daily 15 Avg. Daily 14 Days Onsite 365 (Actual Number) | Container 42 Conditions 01 04 Location(s) Building #4, Building #8 |
| (Code) (Code) (Check it Claiming) Substance Name | <u>70 .67,</u> , | Max. DailyLO Avg. DailyLO Days Onsite365 (Actual Number) | |
| Code) (Code) (Check if Claiming) Substance Name Soluri Sulfate CAS No. 7757 - 82 - 6 DOT No. Substance No. (if available) Percent 6 0 State S Trade Secret (Code) (Code) (Check if Claiming) | <u>67</u> | Max. Daily 15 Avg. Daily 15 Days Onsile 365 (Actual Number) | Container 42 Conditions 01 04 Location(s) Building 4, Building 5. Building 8 |

| FACILITY | IDENTIFICATION | AND SITE | LOCATION |
|----------|----------------|----------|----------|
| 1.791-1 | | | |

| NJEIN 052862 00000 | Street Address 309-327 HVENUE P |
|--------------------------------------|---------------------------------|
| Facility Name ALLIANCE CHEMICAL INC. | City NEWARK State NJ Zip 07105 |

| CHEMICAL DESCRIPTION | HAZARDS | Inventory (Ranges) | STORAGE CODES AND LOCATIONS |
|---|--|----------------------------------|--|
| Substance Name SOLUM SULFATE. | (Enter for all that apply.) | (Enter Code) | (Enter Codes, except Location(s); supply narrative.) |
| CAS No. 7757 - 82 - 6 DOT No. | 67 | Max. Daily 10 | Container 38 Conditions 01 04 |
| Substance No. (if available) | ' | Avg. Daily | Location(s) Lab |
| Percent 60 State S Trade Secret | | Days Onsite_365 | |
| (Code) (Code) (Check if Claiming) | • | (Actual Number) | |
| Substance Name Sooium Surgine | | | 42 20 |
| CAS No. 1313 - 82- Z DOT No. 1849 | 67, | Max. Daily 13 | Container 47 Conditions 01 04 |
| Substance No. (if available) | | Avg. Daily 13 | Location(s) Building #4, Building #8, |
| Percent 56 State 5 Trade Secret | | Days Onsite 365 | South yard |
| (Code) (Code) (Check if Claiming) | | (Actual Number) | |
| Substance Name Society Subject CAS No. 1213 - 82 - 2 DOT No. 1844 | _ | Man Daller La | 20 0 100 04 |
| Substance No. (if available) | 67 | Max. Daily 10 | Container 38 Conditions 01 04 |
| Percent 56 State 5 Trade Secret 7 | | Avg. Daily 10 | Location(s) Lab |
| (Code) (Check if Claiming) | | Days Onsite 36.5 (Actual Number) | |
| Substance Name Suleve | | (Actobe Namoer) | |
| CAS No. 7704-34-9 DOT No. 1350. | , _ | Max. Daily 13 | Container 42 Conditions 01 04 |
| Substance No. (if available) | <u>67. </u> | Avg. Daily 13 | |
| Percent 60 State S Trade Secret | | Days Onsite 365 | Location(s) Building #7, Building #8 |
| (Code) (Code) (Check if Claiming) | | (Actual Number) | |
| Substance Name SULFUR | | ,, | |
| CAS No. 7704 - 34- 9 DOT No. 1-350 | . / 7 | Max. Daily 10 | Container 38 Conditions 01 04 |
| Substance No. (if available) | <u>. 67</u> | Avg. Daily 10 | Location(s) Lab |
| Percent 60 State 5 Trade Secret | | Days Onsite 365 | Ecounion(5) |
| (Code) (Code) (Check if Claiming) | | (Actual Number) | |
| Substance Name BULFURIC HCID | | | |
| CAS No. 7664-93- 9 DOT No. 1830 | 67. | Max. Daily 14 | Container 50 Conditions 01 04 |
| Substance No. (if available) | <u> </u> | Avg. Daily 14 | Location(s) west yard |
| Percent 59 State L Trade Secret | / | Days Onsite 365 | |
| (Code) (Check if Claiming) | | (Actual Number) | |
| Substance Name Surguric Acip. | | | . – |
| CAS No. 7664 - 93- 9 DOT No. 1820 | 67 | Max. Daily 13 | Container 47 Conditions 01 04 |
| Substance No. (if available) | '' | Avg. Daily /a | Location(s) Ruilding #4 |
| Percent_59 State_L_ Trade Secret | | Days Onsite 365 | |
| (Code) (Code) (Check if Claiming) | | (Actual Number) | |

IMPORTANT! Read all instructions before completing. Photocopy this sheet, if you need additional forms. Please print or type all responses.

FACILITY IDENTIFICATION AND SITE LOCATION

| NJEIN | 05286200000 | Street | Address | 309-327 | AVENUE P | |
|---------------|------------------------|--------|---------|---------|--------------|-------|
| Facility Name | ALLIANCE CHEMICAL INC. | City | NEWARI | < | State NJ Zip | 07165 |

| CHEMICAL DESCRIPTION | HAZARDS | Inventory (Ranges) | STORAGE CODES AND LOCATIONS |
|---|-----------------------------|------------------------------------|---|
| Substance Name SULFURIC ACID | (Enter for all that apply.) | (Enter Code) | (Enter Codes, except Location(s); supply narrative) |
| CAS No. 7664-93-9 DOT No. 1830 | 67 | Max. Daily 10 | Container 39 Conditions 01 14 |
| Substance No. (if available) | | Avg. Daily 10 | Location(s) <u>Lab</u> |
| Percent 59 State L Trade Secret | | Days Onsite 365 | |
| (Code) (Check if Claiming) | | (Actual Number) | ` |
| Substance Name FINC (HLORIDE SOLUTION. | | | |
| CAS No. 7646 - 85 - 7 DOT No. 1840 | 67 | Max. Daily14 | Container 50 Conditions 01 |
| Substance No. (il available) | | Avg. Daily 14 | Location(s) west your |
| Percent 55 State L Trade Secret | | Days Onsite_345 | <u> </u> |
| (Code) (Code) (Check if Claiming) | | (Actual Number) | |
| Substance Name ZINC CHEURIDE SOLUTION | | | |
| CAS No. 7646 - 85 - 7 DOT No. 1840 | <u>67.</u> | Max. Daily <u>14</u> | Container 47 Conditions 01 04 |
| Substance No. (if available) | | Avg. Daily 13 | Location(s) West yard, Building #4 |
| Percent SS State L Trade Secret | | Days Onsile_365 | |
| (Code) (Code) (Check'il Claiming) | | (Actual Number) | |
| Substance Name ETHYLEIF GLYCOL | _ | | 1 |
| CAS No. 107 - 21 - 1 DOT No. 0878 | 67 | Max. Daily 13 | Container 47 Conditions 01 64 |
| Substance No. (if available) | | Avg. Daily 12 | Location(s) North yard, Building #4 |
| Percent 59 State L Trade Secret | | Days Onsite_180_ | |
| (Code) (Check if Claiming) | | (Actual Number) | |
| Substance Name ETHYLENE YLYCOL CAS No. 107 - 21 - 1 DOT No. 0878 | | 44- 8-1 | 28 2 20 |
| | <u>67 </u> | Max. Daily 10 | Container 38 Conditions 01 C4 |
| Substance No. (if available) | | Avg. Daily 09 | Location(s) Lab |
| Percent 59 State L Trade Secret (Code) (Code) (Check il Claiming) | | Days Onsite 365 | |
| | | (Actual Number) | |
| Substance Name CURROSIVE LIQUID NOS. | _ | 14. 0.7 | Contained 147 Conditions Of C4 |
| CAS No DOT No. 1760 Substance No. (if available) | 70.67 | Max. Daily 13 | Container 47 Conditions 01 C4 |
| Percent 60 State L Trade Secret | | Avg. Daily 13 | Location(s) Building #3, Building#4 |
| (Code) (Code) (Check if Claiming) | | Days Onsite_240 (Actual Number) | |
| | | (Actual Number) | |
| Substance Name Corresive Liquip Nos. CAS No DOT No. 1760 | | Max. Daily 10 | Container 39 Conditions 01 04 |
| Substance No. (if available) | 70.67,, | , | Location(s) Lab |
| Percent 60 State L Trade Secret | | Avg. Daily 10 Days Onsite 365 | Lucation(s) Lab |
| (Code) (Code) (Check if Claiming) | | (Actual Number) | |
| (CINCA II CHARIMIN) | | (PRODUCTION) | |

Reporting Period: January 1 - December 31, 1988

FACILITY IDENTIFICATION AND SITE LOCATION

| NJEIN 052862 00000 | Street Address 309 - 3 2 7 | AVENUE P |
|--------------------------------------|----------------------------|--------------------|
| Facility Name ALLIANCE CHEMICAL INC. | City NEWARK | State_NJ_Zip_07105 |

| CHEMICAL DESCRIPTION | HAZARDS | Inventory (Ranges) | STORAGE CODES AND LOCATIONS |
|--|-----------------------------|--------------------|--|
| Substance Name FLAMMONE LIAVID CORROSIVE Nos. | (Enter for all that apply.) | (Enter Code) | (Enter Codes, except Location(s); supply narrative.) |
| CAS No DOT No. 2929 | 70,69,67 | Max. Daily 14 | Container 47 Conditions 01 04 |
| Substance No. (if available) | | Avg. Daily 13 | Location(s) Building #3, Building #4 |
| Percent 60 Stale L Trade Secret | | Days Onsite 365 | |
| (Code) (Check if Claiming) | * | (Actual Number) | |
| Substance Name FLANHABLE LIQUID CORROSIVE Nos | | | • |
| CAS No DOT No. 2424 | 70,69,67 | Max. Daily 10 | Container 39 Conditions 01 04 |
| Substance No. (if available) | | Avg. Daily 10 | Location(s) Lab. |
| Percent 60 State L Trade Secret | | Days Onsite 365 | |
| (Code) (Check if Claiming) | | (Actual Number) | |
| Substance Name FLANMABLE LIQUID, HOISONOUS NOS | | | 1- |
| CAS No DOT No192 | 70.69,67 | Max. Daily/3 | Container 47 Conditions 01 04 |
| Substance No. (if available) | | Avg. Daily /그 | Location(s) Building #3, Building #4 |
| Percent_60 State L Trade Secret | | Days Onsite 365 | <u> </u> |
| (Code) (Check if Claiming) | | (Actual Number) | |
| Substance Name ConBustible Liquid Nos. | | | |
| CAS No DOT No. 1993 Substance No. (il available) | 70 67, | Max. Daily 13 | Container 47 Conditions 01 04 |
| Becomb 40 State 1 Trade Court 1 | | Avg. Daily 13 | Location(s) Building #3, Building #4 |
| Percent 60 State L Trade Secret | | Days Onsite 90 | |
| - (Code) (Check if Claiming) | | (Actual Number) | |
| Substance Name HCETYLENE | | | |
| CAS No. 74 - 86- 2 DOT No. 1001 | 70.69,67 | Max. Daily 11 | Container 40 Conditions 02 04 |
| Substance No. (if available) 0015 | | Avg. Daily // | Location(s) Shop |
| Percent 60 State G- Trade Secret | | Days Onsite 365 | |
| (Code) (Check if Claiming) | | (Actual Number) | |
| Substance Name DICHLORD DIFEUORO METHANG | | | // |
| CAS No. 75 - 71 - 8 DOT No. 1028 Substance No. (if available) 0649 | 69.67. | Max. Daily 12 | Container 40 Conditions 02 04 |
| Percent 60 State C Trade Secret | | Avg. Daily 12 | Location(s)Shop |
| (Code) (Code) (Check if Claiming) | | Days Onsite 365 | |
| | | (Actual Number) | |
| CAS No. 75 - 45 - 4 DOT No. 1018 | | Adam Daile 13 | 0 1 10 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 |
| Substance No. (if available) 9386 | 69.67 | Max. Daily 12 | Container 40 Conditions 02 04 |
| Percent 60 State 6 Trade Secret | | Avg. Daily 12 | Location(s) 5 hop |
| (Code) (Code) (Check II Claiming) | | Days Onsite 365 | |
| (Crieck if Claiming) | | (Actual Number) | |

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ATTACHMENT ...

IMPORTANT! Read all instructions before completing. Photocopy this sheet, if you need additional forms. Please print or type all responses.

| FACILITY IDENTIFICATION AND SITE LOCATI | ION | ٠. | |
|---|-----------------------------|---|---|
| NJEIN 052 862 00000 | | Street Address | 309-327 ALE JUEP |
| Facility Name ALLIANCE CHEMICAL | lnc. | | Slate_NJ Zip_07105 |
| CHEMICAL DESCRIPTION | HAZARDS | Invertory (Ranges) | STORAGE COLES AND LOCATIONS |
| CAS No. 7782 - 44- 7 DOT No. 1072 Substance No. (if available) (44 P. Percent 60 State 6- Trade Secret (Code) (Code) (Check if Claiming) | (Enter for all that apply.) | (Enter Jade) Max. DailyI Avg. DailyII Days Onsile_365 (Actual Number) | (Enter Codes, except Loauon(s); supply narrative.) Container 40 Conditions 02 04 Location(s) 54.3 |
| Substance Name PAINT. CAS No DOT No. 1263 Substance No. (if available) Percent 60 State Trade Secret (Code) (Check if Claiming) | 70.67 | Max Daily 10 Avg. Daily 10 Days Onsile 365 (Actual Number) | Container 4: Conditions 01 04 Location(s) 5432 |
| Substance Name PAINT - CAS No. DOT No. 1263 Substance No. (if available) Percent 60 State Latride Secret (Code) (Code) (Check if Claiming) | 70.69.67. | Max. Daily 10 Avg. Daily 10 Days Onsile 365 (Actual Number) | Container 46 Conditions 02 04 Location(s) Shee Building #3 |
| Substance Name #4 FVEC OCC CAS No. 68476 - 3(- 3 DOT No. 1993 Substance No. (if available) Percent 60 State L Trade Secret (Code) (Code) (Check if Claiming) | 70 | Max. Daily 16 Avg. Daily 15 Days Onsile 365 (Actual Number) | Container 5C Conditions 01 04 Location(s) North yard |
| Substance Name HYDROQUINONE. CAS No. 123 - 31 - 9 DOT No. Substance No. (if available) 1019 Percent 60 State 5 Trade Secret (Code) (Code) (Check if Claiming) | <u>67.</u> | Max. Daily 14 Avg. Daily 14 Days Onsite 300 (Actual Number) | Container 43 Conditions 01 04 Location(s) Building #4, Building #8 |
| Substance Name Hype QUINDNE CAS No. 123 - 31 - 9 DOT No. Substance No. (if available) 1019 Percent 60 State S Trade Secret (Code) (Code) (Check if Claiming) | | Max. Daily 14 Avg. Daily 14 Days Onsite 270 (Actual Number) | Container 42 Conditions 01 04 Location(s) Building #4, Building #8 |
| Substance Name Hyproguinone. CAS No. 123 - 31' - 9 DOT No. Substance No. (il available) 1019 Percent 60 State S Trade Secret [(Code) (Code) (Check Il Claiming) | <u>67</u> | Max. Daily 10 Avg. Daily 10 Days Onsile 365 (Actual Number) | Container 38 Conditions 01 04 Location(s) 60 |

841150165

IMPORTANT! Read all instructions before completing. Photocopy this sheet, if you need additional forms. Please print or type all responses. Page 17 of 17

Reporting Period: January 1 - December 31, 1988

| NJEIN 052862 00000 | Street Address 309-327 AVENUEP. |
|-------------------------------------|---------------------------------|
| Facility Name ALLIANCE CHEMICAL INC | City NEWARK State NJ Zip 07105 |

| | | <u> </u> | |
|---|-----------------------------|--------------------|--|
| CHEMICAL DESCRIPTION | HAZARDS | Inventory (Ranges) | STORAGE CODES AND LOCATIONS |
| Substance Name ZINC CAS No. 7440 - 66 - 6 DOT No. | (Enter for all that apply.) | (Enter Code) | (Enter Codes, except Location(s); supply narrative.) |
| CAS No. 7440 - 66 - 6 DOT No. | 70.67. | Max. Daily 14 | Container 47 Conditions 01 04 |
| Substance No. (if available) zozı | | Avg. Daily 14 | Location(s) Building # 4, Building #5 |
| Percent 60 State 5 Trade Secret | | Days Onsile, 365 | |
| (Code) (Check & Claiming) | | (Actual Number) | , |
| Substance Name 2 1 NC CAS No. 7440 - 66 - 6 DOT No | | | |
| CAS No. 744D 66 6 DOT No. | i . | Max. Daily 10 | Container 38 Conditions 01 04 |
| Substance No. (if available) 2021 | 70 67. | | Location(s) Lab |
| Percent (O State C Trade Coast [] | | Avg. Daily 10 | Location(s) Zap |
| Percent 60 State 5 Trade Secret | 1 | Days Onsite 365 | |
| (Code) (Check if Claiming) | <u> </u> | (Actual Number) | |
| Substance Name Sulfuric Acid | 1 | 1 | |
| CAS No. 7664 - 93 - 9 DOT No. 1830 | 67 | Max. Daily15_ | Container 50 Conditions 01 04 |
| Substance No. (if available) | | Avg. Daily/4 | Location(s) West yard |
| Percent 55 State L Trade Secret | | Days Onsite_365 | |
| (Code) (Code) (Check if Claiming) | į. | (Actual Number) | |
| Substance Name DOT No | | | |
| CAS No DOT No | | Max. Daily | Container Conditions |
| Substance No. (il available) | | Avg. Daily | Location(s) |
| Percent State Trade Secret | | Days Onsite | |
| (Code) (Code) (Check if Claiming) | | (Actual Number) | |
| Substance Name | | † | |
| Substance Name | | Max. Daily | Container Conditions |
| Substance No. (if available) | | Avg. Daily | Location(s) |
| Percent State Trade Secret | | Days Onsite | Location(3/ |
| (Code) (Code) (Check if Claiming) | | (Actual Number) | |
| Substance Name | | (Actual Holliosi) | |
| CAC No. | | May Daily | Container Conditions |
| CAS No DOT No Substance No. (if available) | | Max. Daily | Location(s) |
| Percent State Trade County | | Avg. Daily | Location(s) |
| PercentStateTrade Secret [] (Code) (Code) (Check il Claiming) | | Days Onsite | |
| (Code) (Code) (Check if Claiming) | | (Actual Number) | |
| Substance Name | | 1 | and the same |
| 0/3 NO DOT NO. | | Max. Daily | Container Conditions |
| Substance No. (if available) | | Avg. Daily | Location(s) |
| Percent State Trade Secret [| | Days Onsite | |
| (Code) (Code) (Charle & Claiming) | | (Actual Alumbar) | |

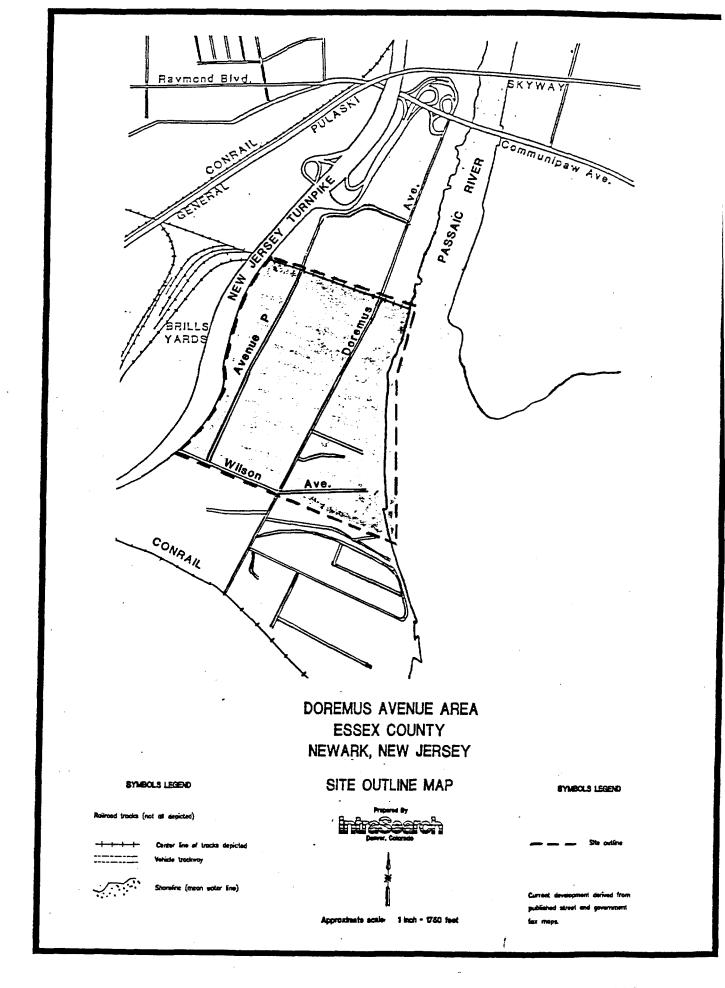
Confidential Draft Interim Report

HISTORICAL AERIAL PHOTOGRAPHY ANALYSIS ESSEX COUNTY NEWARK, NEW JERSEY

DOREMUS AVENUE AREA

Prepared by IntraSearch Inc. 5351 South Roslyn Street Englewood, Colorado 80111

August, 1993



Newark, New Jersey

Initial Conditions (12-05-53)

The location of the study area designated as the Doremus Avenue Area was originally a site of low-lying marshy terrain. Solid fill has been periodically distributed over the area to sufficiently build a permanent land base above the water table. Successive surface grading and accumulation of solid fill material prior to 1953 has provided the subbase for the current site. The origin and composition of the fill material is unknown. The study area is bounded on the east by the Passaic River and on the west by the New Jersey Turnpike. Central RR of New Jersey forms the northern border while Wilson Avenue forms the southern border of the site. Other major features within the study area include Doremus Avenue which runs approximately NE-SW through the central portion, a railroad line running parallel to Doremus Avenue (approximately 60 feet to the east), and Avenue P which trends NE-SW (not continuous through the central portion).

Site History

12-05-53

The development of the study area appears to have been concentrated east of Doremus Avenue and in the northern one-third of the study area. To the east of Doremus Avenue the area consists principally of docking and refueling facilities and refining operations. Numerous buildings and vertical tanks of various sizes occupy the study area with a complex network of pipes connecting these buildings and tanks. Some minor excavation east of Doremus Avenue and north of Wilson Avenue is evident.

To the west of Doremus Avenue development has occurred mainly in the northern section and in the extreme southwest area. Major construction/ excavation activity is observed in the area between Avenue P and Doremus Avenue and north of Wilson Avenue. Within this construction area, a large dump truck pile is observed which probably contains material from the excavated areas. Vehicles in and around the construction site indicate on-going activity. To the north of the construction area two large areas of unknown white(?) material are observed. The origin of this material is unknown, however the raised smooth surface and compartmentalized appearance may indicate material of an evaporitic origin. The unknown material (medium-toned) immediately to the north of the white(?) material may also be of the same origin. To the north and to the

Newark, New Jersey Page 2

(Continued)

west of this unknown material, buildings of various shapes and sizes are observed. The activities associated with these buildings and those in the southwest corner of the site are unknown. Several short segments of the railroad line serve this area.

Major drainage features within the study area are observed mainly in the western half and in the southeastern portion. In the southeast a series of ditches exist directly to the north and south of Wilson Ave. The ditches and buried pipeline on the south side of the road appear to be associated with the sewage disposal plant (not shown on the map) located just to the south of the study area. Although uncertain as to the direction of flow, the relief of the terrain would tend to indicate a direction of flow into the ditch located approximately 120 feet south of Wilson Avenue and toward the Passaic River. The ditch appears to end at a point approximately 200 feet from the river. At that point the ditch may flow into the depression area adjacent to the northern end of the docking facility. The ditch observed in the extreme southeast appears to flow toward the outlet located at the southern end of the docking facility and discharge into the river at this point is clearly evident. To the north of Wilson Avenue another set of ditches/streams is observed. At its western end the ditch drains the small area of construction/excavation and flows south toward Wilson Avenue where it probably flows through a culvert into the system of ditches on the south side of the road. Another ditch located approximately 180 feet to the north of Wilson Avenue flows toward the Passaic River. The head of this ditch starts at the southern end of the rock fill material and terminates at approximately 150 feet from the river. At that point an area of low relief and possible point of discharge into the river is observed.

To the west of Doremus Avenue a network of ditches is observed. Two ditches trending SW-NE are located just east of the New Jersey Turnpike at the bottom of the highway embankment. The northern segment originates at

Newark, New Jersey Page 3

(Continued)

the highway, then turns north and flows along the eastern side of the highway for approximately 1200 feet at which point it branches, both branches still flowing north. Both the north and south flowing segments connect to the major NW-SE trending ditch system. This NW-SE trending ditch (located approximately 1600 feet south of the Central RR of New Jersey) starts just east of the turnpike, flows SE to a point just south of the two large areas of unidentified white(?) material at which point it branches. The main branch flows northeast around the eastern area of white material to a low point just west of Doremus Avenue. The other branch of this ditch flows around the southern boundary of the white(?) material to a point just west of Doremus Avenue then flows north to the low point where it again joins the northern branch. At this location, drainage appears to flow underground and its further course is unknown. A possible course for this underground flow might be in an ENE direction toward the Passaic River. A possible point of discharge into the river is indicated on the map, although no visible discharge is observed. In the north central portion of the study area another ditch flows south and into the major ditch system. In the northeast corner of the site just to the east of a cluster of buildings, a dark-toned depressed area (dry pond?) is observed. This may represent an area of possible discharge (perhaps associated with the nearby facilities) into the ditch. Also in the same area, two areas of standing water/unknown liquid are observed between the cluster of buildings and bulldozer tracks(?). The source of these, although unknown, is probably related to the buildings directly to the north. It is not clearly evident, but this standing water appears to drain to the south into the major ditch system. Although in close proximity to the above-mentioned dark-toned depressed area, it is unknown whether the two are related. Within the large construction/excavation area a series of ditches and levees are observed. The major ditch within this construction area trends in an NNE direction and eventually connects to the previously mentioned major ditch system.

Newark, New Jersey Page 4

(Continued)
Occasional breaks in the levees would appear to indicate that the purpose of this ditch is to drain the construction/excavation area.

04-11-74

Continued development of the study area has occurred. In the eastern portion docking and refueling facilities are still present. Refining operations appear to have been expanded as evidenced by the increase in the number of tanks, pipes, and buildings. The northeast portion of the site appears to be dusted with a light-colored material possibly the result of by-products from the large building or smokestacks in the area.

To the west of Doremus Avenue and to the east of Avenue P major development has occurred on the north side of Wilson Avenue. A large building now occupies the area of excavation as observed in 1953. To the north and adjacent to the building a large rectangular area of white(?) unknown material is observed. This is probably the foundation for future expansion of the building. To the north of this feature a large rectangular area of mostly light-colored unidentified material is observed. A portion of this area is flat and well graded. Within this area is a large body of standing water which appears to be part of a larger pond (dry). Minor excavation work within this area is present. In several areas groups of barrels(?) are observed. Avenue P is now continuous across the study area. A railroad line originating on the west side of the New Jersey Turnpike and continuing under the highway, crosses then runs north parallel to Avenue P is observed. One branch of the track appears to run into the northwest corner of the large building. The fuel refining operations observed on the east end of the site now appear to have expanded over into the north central portion. An elevated pipeline between the facilities crosses over Doremus Avenue. The two large areas of light-colored/evaporite(?) material observed in 1953 no longer exist. These areas appear to have been graded over and/or filled in. A large dry pond contained within the area may indicate that the underlying material may be composed of the same light-colored material. In the western

Newark, New Jersey Page 5

(Continued)

central portion between the New Jersey Turnpike and Avenue P construction activity is observed as evidenced by small dump truck piles and bladework. The extreme southwest portion of the site now appears to be a vehicle parking area. The chaotic clustering of vehicles in this area would seem to indicate the possibility that this is a junkyard.

Major drainage patterns in the eastern half of the study area is confined mainly to the southeast area on both sides of Wilson Avenue. The buried pipeline and ditches to the south of this pipeline are probably related to the sewage disposal plant. No drainage from these ditches into the river is observed. These ditches probably drain underground to an unknown destination. Just to the north of Wilson Avenue located near the group of semi-trailers is a series of ditches. These ditches appear to drain to a low point near the railroad track running parallel to Wilson Avenue. This low point appears to be the entrance to an underground drainage pipe. The exact location and/or existence of this pipe is unknown, however if an imaginary line were drawn originating from the low point and projected perpendicular toward the shoreline of the river, a point is reached which corresponds to an observed discharge into the river. Approximately 100 feet north of the point of discharge into the river, the outlet from an underground(?) pipe is observed. No discharge from this pipe into the river is evident. Approximately 500-600 feet north of Wilson Ave and just east of Doremus Avenue an area of minor construction/excavation is observed. Minor drainages in this area apparently drain into the small depression (located just south of the vehicle parking area. Approximately 800 feet east of this construction area, a building with a body of standing water on its roof is observed. An elevated pipeline also runs along the edge of this building. It is unknown whether the standing body of water is related to this pipeline. Another drainage appears just to the northeast of the intersection of Wilson and Doremus Avenues. This drainage courses around the concrete pads into a NE direction and

Newark, New Jersey Page 6

(Continued)

appears to end at the minor road. Possibly this course drains under the road and into the ditch on the other side.

A network of drainages are noted on the western portion of the study area. A major ditch trending SW-NE runs along the eastern side of the New Jersey Turnpike. The northern segment flows south and the southern segment flows north and both join the major ditch which runs NW-SE. In the northwest portion of the site a large pond is observed. This pond may be related to the buildings located just to the east. However, no visible discharge from the buildings into the pond is evident. Minor drainages in the eroded area in the western central portion of the site drain into the southern segment of the major ditch. The major NW-SE trending ditch mentioned above flows through the low area just north of the large rectangular area of unidentified light colored material, up to Doremus Avenue, then turns northeast and terminates at the same point as observed in 1953. Again it is believed that drainage flows underground and may possibly discharge into the river at a point along the shoreline where some sediment accumulation is observed. A ditch running between the large rectangular area of unidentified light-colored material and Doremus Avenue appears to flow north into the major drainage ditch. This drainage may be used to capture runoff from the well graded area. Regarding the large body of standing water located on this area, no drainages in or out of it are visible. A dark stain is observed at the northern end of the parking lot located at the northeast corner of the large building. Minor drainages on the light-colored area directly to the north may be responsible for this stain. The north central portion of the study area contains a series of ditches which generally flow in a southerly direction and into the major ditch system. Within this area and approximately 300 feet south of the Central RR of New Jersey, a dry pond (or possibly a pond containing sediment laden water) is observed. Whether or not this pond drains into any of the ditches in the area cannot be determined.

Newark, New Jersey Page 7

(Continued)
Another large dry pond is located approximately 1400 feet south of the Central RR and 300 feet east of Avenue P. No drainage into or out of this pond is visible.

Newark, New Jersey Page 8

| Date of Photography | Scene Identification | Photo Scale | Source of Photography | Enlargement Number | Quality |
|---------------------|-------------------------|----------------|--------------------------|-----------------------|---------|
| 12-05-53 | 713-111/112 | 1:20000 | IntraSearch | 112 | G |
| 04-11-74 | 2063-43-5927/5928 | 1:18000 | Aero Service | 5928 | G |



6-05-53

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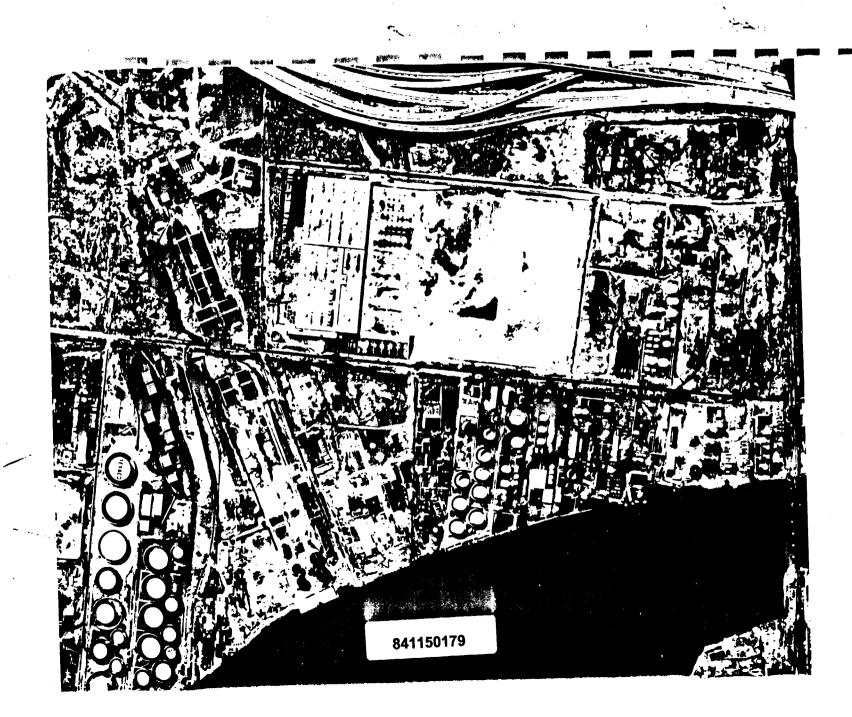
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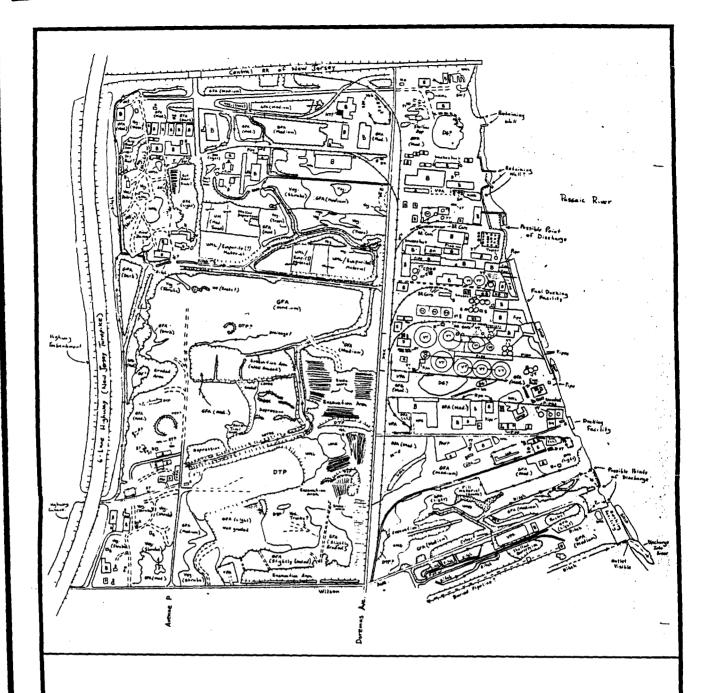
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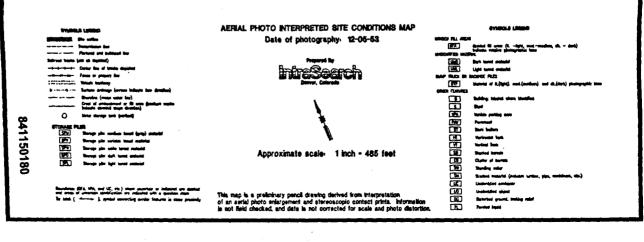


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DOREMUS AVENUE AREA

Essex County Newark, New Jersey



ALLIANCE COLOR AND CHEMICAL COMPANY DIVISION OF PFISTER CHEMICAL COMPANY 309-327 AVE P NEWARK, ESSEX COUNTY, NEW JERSEY 07105 EPA # NJD045794971

GENERAL INFORMATION AND SITE HISTORY

Alliance Color and Chemical Company is located on 8.4 acres of land in Newark, Essex County, New Jersey. The area is in a heavily industrialized section of the city, with the closest residences approximately 1 mile from the site. The population within 2 miles of Alliance is approximately 49,300.

To the west the site is bordered by a tidal basin and the New Jersey Turnpike, to the east the site is bounded by Avenue P. The south side of the site is bounded by property belonging to the Newark Housing Authority (this property was an unregulated dump site that is being remediated), to the north the site is bounded by Conrail tracks and McGredor Street.

Alliance Chemical is located on Block 5020, Lots 3, 6, 8, 12 and 136. The lots are owned as follows: Lot 3-Pfister Chemical Inc., Linden Avenue, Ridgefield Park, New Jersey; Lots 6 and 136-Pfister Urban Renewal, Route 46, Ridgefield Park, New Jersey; Lot 8-Plum Point Realty Corporation, 33 Avenue P, Newark, New Jersey 07105; and Lot 12-Alliance Chemical and Color Inc., 33 Avenue P, Newark, New Jersey.

The site was first developed between 1945 and 1946 by the Sun Chemical Company. Sun Chemical's operations at the site are unknown. Further, with the exception of several Newark Fire Department Storage permits, information on chemicals used at the site are unknown.

In 1965 Alliance Color and Chemical purchased the site from Sun Chemical and began manufacturing speciality organics and pigment intermediates. In 1966 Alliance Color and Chemical was purchased by Pfister Chemical of Ridgefield Park, New Jersey, who retained the name Alliance.

SITE OPERATIONS OF CONCERN

Alliance Chemical manufactures organic chemicals, specifically dye and pigment intermediates and diazo compounds. Some of the chemicals used as raw materials by Alliance include paradichlorobenzene, aniline, acetic anhydride and beta-naphthol.

Sun Chemical and Alliance Chemical both used open unlined trenches to run liquid wastes through to an unlined lagoon. A review of aerial photographs and NJDEP files revealed that the lagoon was filled in without a plan being filed with the NJDEP. A photo interpretation was conducted on September 22, 1989 by Jim Mortimer of the NJDEP, Division of Fish, Game and Wildlife. That interpretation concluded the following: 1) the trench first appears in 1961 and remains visible in both 1971 and 1972 photos, 2) in 1974 the lagoon appears dry and the trench drained and 3) in 1978 the lagoon appears to contain water and the trench appears to be running into both the lagoon and the tidal basin. On January 7, 1980 an explosion and fire destroyed a building at Alliance during the first attempt to manufacture "Diazo 28". On January 10, 1980, NJDEP Representatives inspected Alliance due to the fire and explosion. During the inspection the lagoon was physically

observed and documented (Attachment A-1 & A-2).

As previously stated, Alliance Chemical manufactures intermediates for the textile and photographic industries. Alliance mixes muriatic acid, water and organic chemical reagents in a large vessel. There is a chemical reaction in which the intermediate is synthesized, then filtered and washed. In the synthesis step some material is washed free of product, then filtered and washed again. There are two waste streams from the process. One is a filter cake which is stored in drums and a sludge box, then manifested to a secure landfill in Michigan. The carbon clarification cake located in the waste unit was found to contain cyanide, phenols, ammonia, arsenic, cadmium, chromium, copper, lead, mercury, nickel and selenium (Attachments A-3 & A-4). The second is the waste acidic process water which runs into a neutralization tank.

Alliance's wastewater is treated in an in-ground neutralization tank where it is mixed with ammonia to a pH of about 7 then discharged into the sewer system of the Passaic Valley Sewerage Commission (PVSC). Alliance operates under PVSC Permit No. 20401080 which allows discharges with a pH factor of between 5 and 10.5. According to Anthony Gammaro of PVSC, Alliance was in violation of their discharge permit twice in 1988. According to Mr. Gammaro, on September 27, 1988 the PVSC monitoring equipment at Alliance was inspected by representatives of the PVSC. That inspection revealed that Alliance had been in violation of their permit by discharging wastewater with a pH of less than 5 from August 4, 1988 until September 6, 1988 for 35.25 hours or 4.4% of the monitored time. An inspection on October 27, 1988 revealed that Alliance had again been in violation from September 6, 1988 until October 6, 1988 for 10.5 hours or 1.45% of the total monitored time by discharging wastewater with a pH of greater than 10.5. These are the only two violations on file with the PVSC.

A RCRA Part A application was filed in November 1980 with the U.S. Environmental Protection Agency (USEPA) by Alliance. At that time Alliance listed their waste activity as treatment in tanks (TO1). In May 1983 Alliance requested removal from treatment/storage/disposal (TSD) facility status. Alliance made this request following a Notice of Violation issued by the NJDEP, Division of Waste Management in 1982 for failing to submit an annual report in accordance with the Solid Waste Management Act (Attachment A-7). Alliance maintains that the only waste generated is 100,000 gallons of wastewater per day which undergoes "elementary neutralization" on site prior to discharge to the sewer. On May 18, 1988 Alliance was removed from TSD status (Attachments A-10 & A-11).

On August 3, 1983 an inspection of Alliance was conducted by the Industrial Investigation Unit of the NJDEP. That inspection revealed the disappearance of the lagoon and raised a question of dioxin contamination at the site. The question of possible dioxin contamination arose from the manufacture of Class II dioxin precursor chemicals 2-chloro-1,4-diethoxy-5-nitrobenzene and 5-chloro-2,4-dimethoxy aniline (Attachments A-12, A-13 & A-14).

In 1985, the E.C. Jordan Company of Portland, Maine was selected by the NJDEP to conduct a dioxin sampling episode at Alliance. The sampling was conducted on May 10, 1985. The analysis of the samples collected revealed no traces of 2,3,7,8-TCDD (Attachment A-15).

On May 21, 1986 the NJDEP, Division of Water Resources informed Alliance that a NJDPES permit was not required since their neutralization tank qualified as an Industrial Wastewater Management Facility (IWMF) under N.J.A.C. 7:26-9.1 (c) 12 and 12.1 (b) 3 (Attachment A-16, A-17 & A-18).

On June 29, 1989 the NUS Corporation completed a Preliminary Assessment of Alliance for the USEPA. The report raises concern over the former trench and lagoon areas of the site (see Attachment A-19 & A-20).

On October 3, 1989 representatives of the NJDEP, DHWM, BPA conducted a Pre-sampling Assessment of Alliance Chemical. At that time, Mr. Arthur Gusmano, Vice President of Alliance, stated that there had never been a lagoon on site. When shown a photo of the lagoon, Mr. Gusmano stated that the matter of the lagoon had been taken care of at a meeting in December 1980 between Alliance, the NJDEP and the USEPA in New York. A search of NJDEP and USEPA files has produced no such records, further, Alliance has been unable to produce any records of the meeting.

A sampling episode was conducted on October 19, 1989 by representatives of the NJDEP, DHWM, Bureau of Planning and Assessment. The analytical results of this episode show high levels of soil contamination which will be addressed later in this report.

Alliance Chemical has 16 bulk above ground storage tanks. The tanks are as follows:

Three 3,000 gallon #4 fuel oil tanks,

One 10,000 gallon #4 fuel oil tank,

One 4,000 gallon 98% sulfuric acid tank,

One 3,000 gallon 50% sulfuric acid tank,

One 15,000 gallon 38% hydrochloric acid tank,

One 3,000 gallon 38% hydrochloric acid tank,

One 10,000 gallon 38% hydrochloric acid tank,

One 4,800 gallon 50% zinc chloride solution tank,

One 7,600 gallon 50% caustic (sodium hydroxide solution) tank,

Two 9,000 gallon 20% aqua ammonia tanks.

One 5,600 gallon methanol tank,

One 4,000 gallon isopropyl alcohol tank,

One 5,600 gallon morpholine tank.

Alliance officials, in their contingency plan, maintain that there is a sufficient dike at each tank to contain a spill.

GROUNDWATER ROUTE

In the area of Alliance Chemical the Brunswick Formation is at a depth of approximately 55 feet. Its exact thickness is not known, however, it may be as thick as 5,000 feet. The unconsolidated zone between the water table and the bedrock is composed of Pleistocene deposits. These deposits, which are 55 feet thick in the area of the site, overlie the Brunswick Formation through practically all of the Newark area. The deposits consist of unconsolidated till and stratified glacial drift. The till is an unstratified, heterogeneous mixture of clay, boulders and sand. The drift is composed of sand and gravel.

The aquifer of concern is the Newark Group Brunswick Shale. Most wells are tapped into the extremely fractured upper portion of the aquifer, which is under modified water table conditions. The depth to the water table is 7 to 9.5 feet from the land surface. Groundwater is generally free to move in any direction and seek the level determined by factors affecting recharge and discharge. The least permeable continuous intervening stratum between the ground surface and the aquifer of concern is the silty clay with a permeability of 10^{-5} to 10^{-7} cm/sec.

There are no monitoring wells on site that have been reported to the NJDEP. The only monitoring well at Alliance was installed by Louis Berger and Associates, Inc. of 100 Halsted Street, East Orange, New Jersey. This well, MW-19E P#2613785-2, was installed during an ECRA study of the site by Berger for the New Jersey Turnpike Authority expansion project (Attachment A-21 & A-22). The results, if any, from this well remain unknown since the New Jersey Turnpike Authority will not release its findings to NJDEP at this time.

Alliance Chemical has no industrial wells, but rather uses city water which is supplied by five impound reservoirs in Pequannock and one shared reservoir in Wanaque. There are no potable wells within 4 miles of the site, however, there are a number of industrial wells in the area. These wells are contaminated, according to Paul Butler, Environmental Engineer for the City of Newark.

There is a high potential for groundwater contamination due to the site's past and present activities. High contaminant levels have been detected in soil samples from the facility which may have leached into groundwater due to the high water table.

SURFACE WATER ROUTE

The nearest downslope surface water is the Passaic River, which is located approximately 0.5 mile from Alliance. There is, however, a tidal basin located at the rear of Alliance Chemical which flows in an easterly direction. Although this basin is located upslope of the processing area it should be noted that the facility slope is less than 1%. As was previously stated, an interpretation of aerial photos was conducted. During this interpretation, a trench was observed running from Alliance into the tidal basin. This trench ran from the processing area, parallel with another trench. One trench then went into the lagoon while the other ran into the tidal basin. This basin is located on property belonging to the New Jersey Turnpike Authority and is less than 100 feet from the Alliance property.

The designated use of the Passaic River is SE3. SE3 waters include secondary contact recreation, as well as commercial and industrial uses. There are no surface water intakes within 4 miles of the site. There are no known endangered species habitats within 1 mile of Alliance.

The potential for contamination of the tidal basin via runoff is high. Soil sampling at surface level has revealed high contaminant levels and Alliance is located on a 100 year flood plain. Should heavy rain fall at the site, surface contamination could be easily washed into the basin. There are no known episodes of sampling of the tidal basin.

AIR ROUTE

Alliance Chemical has no known processes which discharge to air. Alliance was issued a Notice of Prosecution on June 6, 1977 for emitting visible smoke from a standby boiler (Attachment B-11).

Due to the materials used and stored at Alliance, the potential for release to air is high.

SOIL

There have been several episodes of soil sampling at Alliance. The first episode was conducted by the NJDEP on November 25, 1980. No parameters are given in the report (Attachment C-2). At that time, two samples were collected in the area of the lagoon. Results of analysis by Stablex-Reutter Inc. showed xylene at 1,100 ppb, ethylbenzene at 298 ppb and Aroclor 1254 at levels of 27,000 and 23,000 ppb. The high PCB levels were later corrected to 2,700 and 2,300 ppb (Attachments C-4 & C-7).

A second sampling event took place on December 10, 1980. At that time the NJDEP, Division of Hazardous Waste Management collected six samples of sludge from the acid pit area. There are no reports addressing parameters for detection nor is there a sampling plan. The samples were taken to the NJDEP laboratory set up at the Goose Farm site in Plumstead Township, Ocean County, New Jersey. There are no records of an analysis being performed on these samples (Attachments C-10, C-11 & C-12).

A sampling episode was conducted on April 22, 1981 by of the NJDEP. At that time samples were collected from the trench at the rear of the property. There are no records of analysis or where these samples were sent (Attachments C-15, C-16 & C-17).

On May 10, 1985, the E.C. Jordan Company of Portland, Maine conducted a sampling episode at Alliance Chemical under a contract with the New Jersey Department of Environmental Protection. At that time a total of nine samples were collected for 2,3,7,8-TCDD analysis. Seven of the samples were collected at the soil surface, including one duplicate, and two were collected in the sub-surface. The samples were sent to Environmental Testing and Certification Corporation of Edison, New Jersey for analysis. The analysis took place on May 26, 1985 and no 2,3,7,8-TCDD was detected (Attachment A-15).

A Pre-sampling Assessment by representatives of the NJDEP, DHWM, BPA on October 3, 1989 revealed numerous areas of soil staining throughout the site. During the inspection, puddles were observed with a sheen at several locations. Further, concrete areas around the wastewater trenches were stained with multi-colored substances. The area where the former lagoon was located was void of vegetation. The soil contained numerous pieces of building material, such as bricks. It is believed that some of this fill came from the building which was destroyed in the January 1980 explosion and fire.

A sampling episode was conducted by representatives of NJDEP, Division of Hazardous Waste Management, Bureau of Planning and Assessment on October

19, 1989. At that time eleven samples were collected for Target Compound List plus 30 peak analysis (TCL + 30). Additionally, five samples were collected for 2,3,7,8-TCDD analysis and three others for Petroleum Hydrocarbon (PHC) analysis. Results of analysis show elevated levels of volatiles and semi-volatile organics as well as high PHCs. No 2,3,7,8-TCDD was detected (Tables 1 & 2). One soil sample had a pH of 2 while another had a pH of 5.

DIRECT CONTACT

The potential for direct contact by the public is low. Alliance has a 7 foot chain link fence around the facility. Further, the site is operational 24 hours a day and is in a non-residential area. The potential for employee contact is high due to site operations, storage and surface level contaminants.

FIRE AND EXPLOSION

On January 7, 1980 an explosion and fire took place at Alliance. The fire was discovered by the Newark Fire Department Arson Squad. Seven workers were injured in the incident, four of them were treated and released while the remaining three required hospitalization. The Newark Fire Department listed this incident as accidental. Records obtained from the U.S. Labor Department, Occupational Safety and Health Administration (OSHA) showed the fire to have been caused mostly by negligence. According to an OSHA report issued on February 14, 1980 Alliance was attempting to manufacture "Diazo 28." The report points out that, "reactivity or instability was not determined", "thermal tests were not taken", "no pilot plant batches were run" and "reaction heats were not determined". The report further points out that "chemical operators were not informed of the hazard that may have been encountered during manufacturing of Diazo 28". Finally, the report points out that the wrong reaction vessel was in use at the time (Attachments D-5 & D-6).

Additional incidents of employee injury and improper fire training are documented in a 1983 OSHA report (Attachment D-11).

No fire inspection has been conducted at Alliance in over two years. According to Captain Vince Ladd of the Newark Fire Department Inspection Bureau the reason for the lack of inspections is due to the lack of inspectors. Captain Ladd did point out that Alliance had not registered with the State Bureau of Fire Safety in according with State law.

The potential for fire and explosion at Alliance remains high due to materials stored there and the lack of personnel training.

ADDITIONAL CONSIDERATIONS

There is limited vegetation at Alliance, vegetation that is present is stressed. There is no known damage to fauna. Damage to off-site property is unknown. Alliance's past practice of discharging into the tidal basin at the rear of their property may have lead to off-site contamination.

ENFORCEMENT ACTIONS

Alliance was cited by the NJDEP, DHWM, Bureau of Metro Enforcement for the following violations on May 29, 1987: 1) failure to document training 2) failure to submit current lay out of facility, 3) failed to document fire inspections 4) contingency plan failed to describe actions in emergencies 5) failed to describe agreements with authorities 6) failed to have address and phone number of emergency personnel and 7) no emergency equipment.

Further, on May 29, 1987 Alliance was cited by the NJDEP, DHWM, Bureau of Metro Enforcement for: 1) spill of a hazardous substance and 2) non-notification of the spill to the Department (Attachments E-1 & E-2). This action was taken as a result of an ammonia spill.

SUMMARY OF SAMPLING DATA

Sampling date:

Sampled by:

May 10, 1985

E.C. Jordan Company P.O. Box 7050, DTS

Portland, Maine 04112

Samples:

Nine soil samples were collected

Laboratory:

Environmental Testing and Certification

Corporation

284 Raritan Center Parkway Edison, New Jersey 08837 Certification #12257

Parameters:

2,3,7,8-TCDD

Sample description:

1. All samples were collected at 0 to 12

inches.

2. Samples were collected at the rear of the site in the area of the former lagoon as well as in the area of the neutralization

tank.

Contaminants detected:

QA/QC:

No 2,3,7,8-TCDD was detected.

There were no records that could be found regarding any QA/QC review being conducted.

File location:

NJDEP/DHWM/Metro Enforcement West Orange, New Jersey

2. Sampling date:

Sampled by:

October 19, 1989

NJDEP, Bureau of Planning and Assessment Division of Hazardous Waste Management A total of eleven soil samples were collected, one of which was a duplicate.

Samples:

A. Laboratory:

Envirodyne Engineering

1908 Innerbelt Business Center St. Louis, MO 63114-5700

Parameters:

Certification # Not certified
All samples were analyzed for Target Compound
List + 30 peaks and five additional samples

for 2,3,7,8-TCDD

B. Laboratory:

Analytikem

28 Springdale Road

Cherry Hill, New Jersey 08003

Certification # 04012

Parameters:

Sample description:

The second of the December 1999

Three samples for Petroleum Hydrocarbons

1. All samples were collected at depths from 0

to 6 feet.

2. Samples were collected at the rear of the site in the area of the former lagoon and trench. Additional samples were collected

from several piles of soil on site.

Contaminants detected:

QA/QC:

See Tables # 1 and 2

Both quality assurance and quality control reports are pending from BEMQA. NJDEP Chain-of-Custody forms were used for all samples collected and a 2, 3, 7, 8-TCDD

proficiency sample was included.

File location:

New Jersey Dept. of Environmental Protection Division of Hazardous Waste Management Bureau of Planning and Assessment 65 Prospect Street Trenton, New Jersey

PRIORITY DESIGNATION

This site is assigned a medium priority designation, based on available information and the potential for groundwater, surface water and air contamination.

RECOMMENDATIONS/CONCLUSIONS

Due to conditions at Alliance Chemical it is recommended that the New Jersey Department of Environmental Protection take action to have Alliance begin soil remediation. Additionally, the closing of the lagoon should be pursued.

It is recommended that additional samples be collected at Alliance to determine contamination levels in other areas of the site. Samples should be collected from the front part of the property (facing Avenue P). This area was the site of a former junkyard. Additional samples should be collected at depth from the area of the former lagoon to determine other contaminants present, their levels and vertical extent at depth of contamination.

Samples of both soil and water should be collected from the area of the tidal basin, this area may have been the scene of an unpermitted discharge from a wastewater trench.

It is further recommended that groundwater monitoring be initiated. During the October 19, 1989 sampling episode conducted by representatives of the NJDEP, DHWM, BPA water was encountered at a depth of approximately 5 feet. Soil contaminants may be leaching into groundwater due to the high water table.

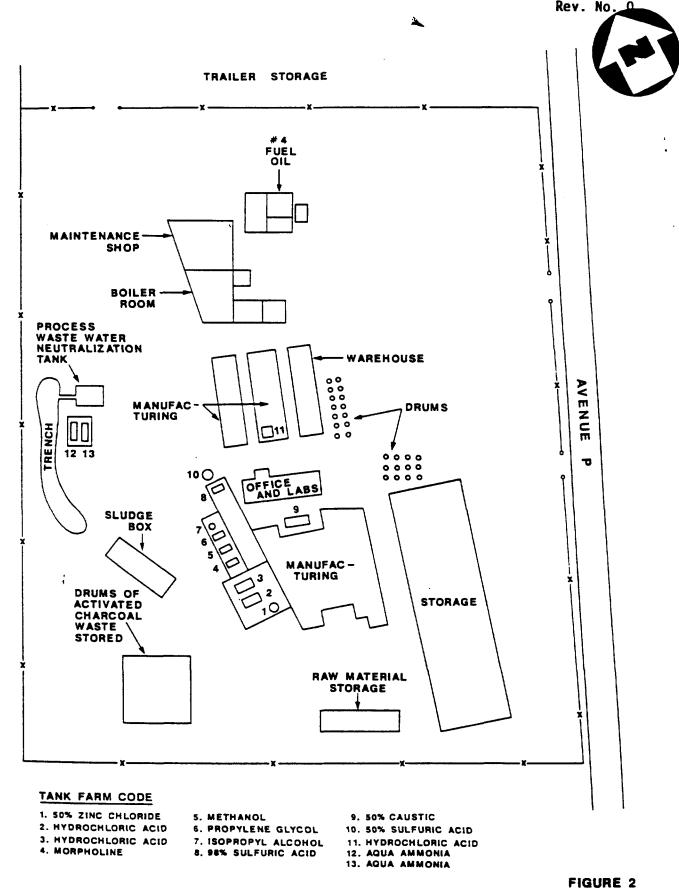
Submitted by:

Jerry O'Donnell HSMS IV Bureau of Planning and Assessment January 24, 1990

1/10/80 PFISTER - ALLIANCE CHEMICAL NEWARK, N.J.

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ATTACHMENT -



SITE MAP ALLIANCE CHEMICAL INC., NEWARK, N.J.

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02-8904-15-PA

TABLE -1

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SITE: AlliANCE Chemical LOCATION: 309-327 AVE P

NewARK, ESSEX County, N. J.

SUMMARY OF SAMPLING DATA VOLATILES

PAGE / OF 12

| DATE SAMPLED O.T. SCA. | 19,158 | ·9 | | | | | t | | · | |
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| Bromomethane'. | <u> </u> | | | | | | | <u> </u> | | |
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| Chloroethane | 1 | | | | | • . | | | | ĺ |
| Methylene Chloride | 128 | 12.000 | 20(10) | • | | 12 | | 17(50) | 23 | 1/80 |
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| | I | 1 / / / / / / / / / / / / / / / / / / / | 1 | 1020 | 11/0/2 / 1/2 | 200 20 | 164. | 1227 | | 19,- |

SUMMARY OF SAMPLING DATA VOLATILES (CONT.)

PAGE 2. OF 12.

| DATE SAMPLED Oct. 19,1989 SAMPLE NO. MATRIX - Soil | , | | | | | | • | | | | |
|--|--------------|-------------|--|----------|-------------|----------|------------------|-------------|--|--------------|--|
| UNITS | 5-1 | 5-1 | 5÷3 | 5-4 | 5-5 | 5-7' | 5-8 | 5-9 | 5-10 | 5-11 | 5-13 |
| Vinyl Acetate | | : | t | | : | | | | | , | |
| Bromodichloromethane | | - | | | | | | | | · • | |
| 1,1,2,2-Tetrachloroethane | | | 10 JD | | | | | | | | |
| 1,2-Dichloropropane | | | 10 40 | | | | | | | | |
| trans-1,3-Dichloropropene | 1 | | | | | | | | 1 1 | | <u> </u> |
| Trichloroethene | | | | | | | | | | | [|
| Dibromochloromethane | İ | | <u> </u> | | | | | | | | |
| 1,1,2-Trichloroethane | | <u> </u> | : : | | | | | | | | 1 |
| Benzene | 1 | <u> </u> | , | /8(Jn) | | | | | : | اري ا | 5/501 |
| cis-1,3-Dichloropropene | İ | İ | <u>: </u> | 101111 | | | | | <u>:</u> | ' | 13 (3 1)/ |
| Bromoform | i | _ <u></u> | • • | <u>'</u> | | | | | 1 | | ! |
| 4-Methy1-2-Pentanone | <u> </u> | | 1 | <u> </u> | <u>;</u> | | | : : | 1 | | <u>,</u> |
| 2-Hexanone | <u> </u> | <u> </u> | 1 5 | <u>:</u> | <u> </u> | | 1 | | 1 | 1 | 1 |
| Tetrachloroethene | | | <u> </u> | <u>i</u> | | | | | 1 | 1. | <u> </u> |
| Toluene | | 5,900 | 220(0) | 420(0) | <u>:</u> | <u> </u> | | | 490) | 115 | 16/0) |
| Chlorobenzene | 15 | 3/0,000(€) | • | 1200(0) | 11122 | 1 | 6 | <u>}</u> | 1 | | 1 |
| Ethylbenzene | | 32,150 | | 180 (0) | ,, | 11// 0 | ! l ₃ | 27.5/7 | 29(50 | 3 | 122. (1 |
| \$1 | : | <u> </u> | • | 170001 | · × / O(° / | טמדו | 1 | 3700 | <u>/ </u> | 110 35 | 100 6. 1 |

SUMMARY OF SAMPLING DATA SEMI-VOLATILE COMPOUNDS

PAGE 3 OF

DATE SAMPLED OCT. 19, 1989 SAMPLE NO. MATRIX - So,/ UNITS 3-5 5-2 Phenol bis(2-Chloroethyl) ether 2-Chlorophenol 1,3-Dichlorobenzene 43(1) 1,4-Dichlorobenzene 730 (1) 4,200 (5) 4,600(5) 520(x) 120(1) Benzyl alcohol 1,2-Dichlorobenzene 2-Methylphenol 2900(1) bis(2-Chloroisopropyl) ether 4-Methylphenol N-Nitroso-di-n-propylamine Hexachloroethane Nitrobenzene Isophorone 2-Nitrophenol 2,4-Dimethylphenol Benzoic acid 3887000 11641 2001 345 4001 2314,000 712,400 169 1100 38.650, 76300 1/2/7/20 10 56000

SUMMARY OF SAMPLING DATA SEMI-VOLATILE COMPOUNDS (CONT.)

DATE SAMPLED - GCT 19,1989 SAMPLE NO. MATRIX - So. / UNITS

| MATRIX ~ 30, / UNITS | 5-/ | 5-2 | 5-3 | 5-4 | 5-5 | 5-7 | 5-8 | 5-9 | 5-10 5-11 |
|------------------------------|---------------------------------------|---------|---------|-----------|--|---------|----------|---------|-------------|
| bis (2-Chloroethoxy) methane | | | | | | | • | | |
| 2,4-Dichlorophenol | | | | 14,000(1) | 7460 | | 2805) | | S. C. Carlo |
| 1,2,4-Trichlorobenzene | 28,000(2) | 7600(1) | 5200(T) | | 5200 | 14057 | | | • |
| Naphthalene | 8.700(1) | i | | 1 | 1300(1) | 6600 | 1300 (1) | 25000 | ; ; |
| 4-Chloroaniline | | | ÷ | | 2600(5) | | | | |
| Hexachlorobutadiene | | | | | | | | | |
| -Chloro-3-methylphenol | | | | ļ. | , | | | | ; |
| 2-Methylnaphthalene | | | · ! | | 2000(1) | 1000/5 | 1100(1) | 1300(J) | ; |
| Hexachlorocyclopentadiene | | | | | | | | | |
| 2,4,6-Trichlorophenol | i | . : | | | | | | | |
| 2,4,5-Trichlorophenol | | | | 3,600(3) | | | | | |
| 2-Chloronaphthalene | · · · · · · · · · · · · · · · · · · · | | | 1-70-00-2 | | | | | |
| 2-Nitroaniline | | | | | | | | | 110000 |
| Dimethylphthalate | | | | | | | i- | i | |
| Acenaphthylene | | | | | | 110(1) | 280(J) | 180/1 | : |
| 2,6-Dinitrotoluene | | | | <u> </u> | | 1110(3) | 1 | 110-(|] |

| | | SUMMARY OF SAI SEMI-VOLATILE CO | | | page <u>5</u> of <u>12</u> |
|---|------------|---------------------------------------|-----|---|----------------------------|
| DATE SAMPLED -0<7/7, 1989 SAMPLE NO. MATRIX - 5.1 UNITS | | | | | |
| | , 5-13 | · | | · | |
| bis (2-Chloroethoxy) methane | | • | * . | • | ` |
| 2,4-Dichlorophenol | | | | *************************************** | |
| 1,2,4-Trichlorobenzene | | | | | |
| Naphthalene | | . • | | | |
| 4-Chloroaniline | | | | | |
| Hexachlorobutadiene | | | | | |
| 4-Chloro-3-methylphenol | | | | | |
| 2-Methylnaphthalene | · · | | | | |
| Hexachlorocyclopentadiene | | | | | |
| 2,4,6-Trichlorophenol | | | : | | |
| 2,4,5-Trichlorophenol | | | | | |
| 2-Chloronaphthalene | | | | <u> </u> | |
| 2-Nitroaniline | 110,060(5) | | , | | |
| Dimethylphthalate | 1 | | | * | |
| Acenaphthylene | | | | | |
| 2,6-Dinitrotoluene | | · · · · · · · · · · · · · · · · · · · | | | |

DATE SAMPLED - Oct 19,1989 SAMPLE NO. MATRIX - So. /

| UNITS 5-1 5-2 | 5-3 | 5-41 | 5-5 | 5-7 | 5-8 | 5.9 | <u> </u> |
|--------------------------------|-----|-----------|---------|---------|---------|----------|---------------|
| 3-Nitroaniline | | | | | | | |
| Acenaphthene | | | | 520(5) | | 560 | 18 |
| 2,4-Dinitrophenol | | | | | | | . |
| 4-Nitrophenol | | • | | | | | |
| Dibenzofuran | ļ | | | 340(1) | 110(1) | 570(I) | · |
| 2,4-Nitrotoluene Dintagtalugne | | | | • | 545 | | |
| Diethylphthalate | | | | | 1 | ! ! | |
| 4-Chlorophenyl-phenylether | | · | | | | | L |
| Fluorene | | | | 560 (1) | 24000 | 630 | |
| 4-Nitroaniline | | | | | | | |
| 4,6-Dinitro-2-methylphenol | • | · | | | | | |
| N-Nitrosodiphenylamine | | | | 170(3) | | | ! !! !! |
| 4-Bromophenyl-phenylether | | | | | | 1 | ! |
| Hexachlorobenzene | 1 | ! | : | | | <u> </u> | |
| Pentachlorophenol | | 1 | : | | | | |
| Phenanthrene | | 3 900 (5) | 2 500 J | 2900(3) | 12800(1 | 3600 | |
| Anthracene | | | | (80(1) | 920(5. | 1 | |

SUMMARY OF SAMPLING DATA SEMI-VOLATILE COMPOUNDS (CONT.)

DATE SAMPLED - Oct. 19,1987
SAMPLE NO.
MATRIX - So. /

| UNITS | 5-1 | 5-2 | 5.3 | 5-4 | 3-5 | 5-7 | 5-8 | 5-9 | 5-10 5-1 |
|-----------------------------|------------|---------------|-----|---------|------------|-----------|----------|------------|----------|
| Di-n-butylphthalate | | | | | 710 | 350 (313) | | 220(5B) | |
| Fluoranthene | | | | 2800(3) | 5700 | 4500(5) | 540015 | 5/00 | |
| Pyrene | ; | - | | 4.80(J) | 3100(T) | 1 | 4500 (5) | | |
| Butylbenzylphthalate | j | 1 | • | | | | | /40(T) | |
| 3,3-Dichlorobenzidine | | 16,055(3) | | İ | 1,800,0000 | | į | | |
| Benzo (a) anthracene | 1,000,000 | 1 | | | 3500(5) | j | 2700(5) | 1900 | i |
| Chrysene | 31,000 (5) | | | ! | 4000 (5) | | 2760(5) | 1500 | |
| bis(2-Ethylhexyl) phthalate | 20,000 (T) | | • | 5900(5) | . * | | 1 | 15,000 (B) | 79ac |
| Di-n-octylphthalate | | | | | | | | 72(1) | |
| Benzo (b) fluoranthene | | 1 1 | | | 4400 (5) | 2 300(31) | 4500(3) | 2300 | |
| Benzo (k) fluoranthene | | | | | | | | | |
| Benzo (a) pyrene | i | : 1 | | | 13700/51 | 980(3) | 2400(5) | 1160 | : |
| Indeno (1,2,3-cd) pyrene | | ! | | ! | 1 | | 790 (5) | | |
| Dibenz (a,h) anthracene | | : | | | 660/1 | | - 1 | 110 (5) | |
| Benzo (g,h,i) perylene | | ! | | | 2800 (5) | 760 (J) | ! | 840(I) (| |
| | | -, | |] | | • | i | | i |

DATE SAMPLED OCT 19,1989
SAMPLE NO.
MATRIX - So. I
UNITS

| UNITS | S-13 |
|-----------------------------|--|
| Di-n-butylphthalate | |
| Fluoranthene | ig. |
| Pyrene | |
| Butylbenzylphthalate | |
| 3,3-Dichlorobenzidine | <u> </u> |
| Benzo (a) anthracene | |
| Chrysene '. | f |
| ois(2-Ethylhexyl) phthalate | 55000 (1) |
| Di-n-octylphthalate | |
| Benzo (b) fluoranthene | |
| Benzo (k) fluoranthene | |
| Benzo (a) pyrene | |
| Indeno (1,2,3-cd) pyrene | |
| Dibenz (a,h) anthracene | |
| Benzo (g,h,i) perylene | |

SUMMARY OF SAMPLING DATA
PESTICIDES AND PCRS

PAGE 9 0F 12

| | | PESTIC | IDES WAD LODS | | | |
|---|---|-------------|---------------------------------------|---------------------------------------|---------|---------------------------------------|
| DATE SAMPLED OCT 15,1989 SAMPLE NO. MATRIX - So.1 | | | | | | |
| UNITS | | North | DE TECTES | · | | |
| alpha-BHC | t | • . | | ÷ | • : | ` |
| beta-BHC | • | | | | | 1 |
| delta-BHC | | | | | <u></u> | |
| gamma-BHC | | | | | | į |
| Heptachlor | | | | | | |
| Aldrin | | | | | | |
| Heptachlor epoxide | | | | | | |
| Endosulfan I | | | | · · · · · · · · · · · · · · · · · · · | | |
| Dieldrin | | | | | | · · · · · · · · · · · · · · · · · · · |
| 4,4' -DDE | : | | | | | |
| Endrin | | | | | | |
| Endosulfan II | | | | | | |
| 4,4' -DDD | | | | | | |
| Endosulfan sulfate | | | | | • | |
| 4,4' -DDT | | | | | | |
| Methoxychlor | | | | | | |
| Endrin ketone | | | · · · · · · · · · · · · · · · · · · · | | | |

SUMMARY OF SAMPLING DATA PESTICIDES AND PCBs (CONT.)

DATE SAMPLED -Oct 19,1989 SAMPLE NO. MATRIX - So. /

| UNITS | 5-1 | 5-2 | 5-3 <i>5-</i> | -14 S -3 | 5-7 | 5-8 | 5-64 | 5-10 | 5-11 | 5-13 | |
|-----------------|---------------------------------------|-----|---------------|-----------------|----------|----------|----------|------|------|------|-----------------|
| alpha-Chlordane | | | | | | | | | | | · |
| gamma-Chlordane | | i | | | | | | | | | ' '; |
| Toxaphene | | Ī | | <u> </u> | 1 | | | | | | , A. |
| Aroclor-1016 | | | | <u> </u> | | | | | | | . į |
| Aroclor-1221 | | | | | 1. | i I | | | | | <u></u> |
| Aroclor-1232 | | | . ! | | 1. | | | | | | |
| Aroclor-1242 | | | | <u> </u> | | <u> </u> | | | | | |
| Aroclor-1248 | 16,660 (D) | | | | 5000/01 | | 4900 (D) | | | | |
| Aroclor-1254 | / | | | | 4900 (D) | 1 | | | | | |
| Aroclor-1260 | · · · · · · · · · · · · · · · · · · · | İ | | | 1 | İ | , | | | | |

TABLE -4

SUMMARY OF SAMPLING DATA METALS PPM

PAGE // OF /

DATE SAMPLED - Oct 19,1989 SAMPLE NO. MATRIX - S.. 1

| UNITS | 5-1 | 5-2 | . ج. ا | 5-4 | 5-5 | 5-7 | 5-5 | y 5- | 9 5- | 10 5-11 | ' 5-13 | 4.1 |
|-----------|-------|------|--------|------|------|-------------|---------|--------|------|----------|--------|--|
| luminum | 1630 | | | | | | • | | | 0 2730 | | |
| Intimony | , | | | | 1 | 17.8 | | 1 | 1 | | | ************************************** |
| Arsenic | 3.5 | 4,1 | 6.3 | 6.3 | 15,4 | 4 | 5.5 | 8.2 | 13.2 | 6.1 | 6.9 | i |
| Barium | 58.2 | 211 | | 811 | 1420 |] . | 1 | | j | 52.8 | 52.2 | |
| Beryllium | | 2.9 | 14.2 | 3.7 | 4.0 | 2.4 | 2,3 | 2.9 | 12.9 | 8.0 | 5.6 | |
| Cadmium | 1.7 | 3.8 | 5.5 | 11.8 | i | 2,2 | | 6.0 | | 1411 | 17.1 | |
| Calcium | 3920 | | 5860 | | 3440 | ĺ | 7320 | 6790 | , | 3730 | 41960 | |
| Chromium | 92.6 | 56.9 | | | 38.9 | 1 | 41.8 | 61.9 | 1 | 29.5 | 114.6 | |
| Cobalt | | | 1 | | | | | | 1 | | | |
| Copper | 103 | 244 | 139 | 207 | 254 | 267 | 62.7 | 1050 | 900 | 118 | 130 | |
| ron | 23700 | í | ì | i | | İ | | 1 | 1 | i | 58200 | |
| ead | 180 | 475 | | | 1430 | | | 1040 | i | 1 | 250 | |
| lagnesium | | 2350 | | | | 1660 | <i></i> | 2250 | ì | 26.20 | | į |
| langanece | i | | | | 339 | | 730 | | 61.9 | Ī | 261 | |
| lercury | | | | | | | | | | 0,79 | 0.69 | ng ang kananan ang kanang kanang kanang kanang kananan ang kanang kanang kanang kanang kanang kanang kanang ka |
| Hckal I | . 1 | | | | 1 | 33.2 | 1 | 1.19.5 | | <u> </u> | 152 | |
| otassium | | 1580 | | 840 | | 55.2. 17 | | 1872 | 1311 | | | |

DATE SAMPLED OCT 19,1989
SAMPLE NO.
MATRIX ~ 5.../
UNITS

| ; |] | | | T | | | | | 5-18 | <u>5-11</u> | 5-/3 | | | |
|---------|------|------|------|------|-------|------|------|------|-------|-------------|-------|--|--------|-----------|
| elenium | | | | | 2.5 | | | 1.8 | | | | | | , |
| ilver | | | | 1 | | | | | | İ | | | | · Section |
| odium | 1480 | 1, | | 1020 | | | | . | | | | | | |
| hallium | | | | | | | | | | j | | | | |
| anadium | 17.5 | 19.9 | 28.5 | 76.3 | 44.3 | 18.8 | | 21.7 | 12.41 | 17.3 | 24.5 | | ., | |
| inc | | | | | | | | | | l | | | | |
| | | 5410 | 7590 | 8270 | 13600 | 608 | 342 | 2500 | 701 | 5240 | 10000 | | | |
| yanide | 0.25 | 2.6 | 1.5 | 4.1 | 1.4 | 1.6 | 0.63 | 1.41 | 3.4 | 16.3 | 12.3 | | | |

Other

| SAMPLE TYPE/ NUMBER | BSA NUMBER | TIME COLLECTED | SAMPLERS | DESCRIPTION/LOCATION ' |
|-------------------------------------|------------|-------------------|-----------------------|---|
| Soil-1 TCL+30 Ve's | 10199 826 | 1037-1042 | K. Kloo D. Mustese | Collected at 3 inches and described as donk, 8, 17, fin Soil, AREA WAS' void of wege Tutlon. Located at Nonth wist conner by fence |
| So:1-2: tc2+30 | 101998277 | 1059-1115 | D. Mullisc | Collected at a depth of six feet, in Described as dank! Silty, Soil with plastic debris, and an baganic odor. The an- is slightly west and North of Aque Ammonia Stoneye intended is void of vegeta Trops. |
| So./-3 TCL+30 VO Droxin | 10199828 | 1105-1120 | В. Тепреч | Collected at a depth of one To one and half feet. Described as Red Clay with Black STReaks. The area is southwest of the Aqua Ammonia SToncaje tunks, and has limited vegetations |
| So./-4 TcL +30 Vo | 10197729 | 1167-1115 | K. K/00 | Collected at five fect. Pescerbed as dank, with places of Hebris and a Strong organic odor. Collected from an area west of the Aqua Ammonia Tank recan the fines line. |
| Soil-5 VCL +30 Vos Diexial | 10/99830 | 1118-1125 | C. Holstrom | Collected at Two and one hulf feet. Described as Bluck, oily, silty Soil with a possible organic odor collected from an area west of The Sewen Collection Busing with limited we street |
| So.1-7 TCL +30 UO'S DIOXIA | 10199332 | 11:57-12:15 | K. Kloo | Collected at a depth of four feet, Described as dank organic material, mixed with find gray sand and debris with a strong organic odor. Sample was collected in an area of I mited vegetation south of the Sewer Collected busin. |
| 841150205 | | | | |

| was collected west of building AT. Soil 5 1019834: 1201-1215 D. Multese Sample was collected at a depth of two feet in ann void of vijetation, the top one foot was a red collected foot was black and sandy with building debais mixed in Sample was collected. Sample was collected west of building Ag. Soil-16 10199835 1225-1240 B. Tozpey Sample was collected at Juniface level. The Soil Teleson Vois 16199842 Was dunk, and only with amounts of gravel in The Sample had an objected at a surface level in The Sample had an objected at a surface level in collected at a surface level in the Sample baid and objected at a surface level in an long of the sample o | | | | .* | |
|--|--------------------------------------|------------|-----------|---------------|--|
| TCL130 PHC 10199841 WAS Void of VyeTaTion, Sample is described as a dank spind with an oily substance in it. The sample was collected west of building £7. Soil 5 10199834: 1201-1215 D. Mattese Sample was collected at a depth of two feet in a teltso TCL130 TCL130 Vois Soil -16 10199835 1225-1240 B. Tozpey Sample was collected at sundace level, The Soil Was dank pand oily with amounts of gravel in the "Sample was dank and organite odon. Was collected at a sunface level, The Soil The "Sample had and organite odon. Void of vyeTaTion, on the South Sold flexs mittellar. Tol99837 Tol730 Void of vyeTaTion, on the South Sold flexs mittellar. | | BSA NUMBER | | SAMPLERS | DESCRIPTION/LOCATION |
| Soil-5 10/99834: 1201-1215 D. Multiss Sample was collected at a depth of two feet in any void of vy itation, the top one foot was a red control of vy itation, the top one foot was a red control of void of vy itation, the top one foot was a red control of various black and sandy with building debais mixed in Sample was collected. Sample was collected west of building the soil terms collected at sundace level, the soil vois 10/99842 Pite Soil 11: 10/99836 10/99843 10/99843 Void of vy etation, on the south side of the site terms collected at a sunface level in an void of vy etation, on the south side of the site terms collected at a sunface level in an void of vy etation, on the south side of the site terms collected and and only with gold flexs mitters. | TCL+30 PHC | | 1205-1217 | C. Ho 1s Them | danh spud with an only substance in it. The sample |
| Soil-13(Dup) 10199837 10199843 Void of vegetation, on the South Side of the SITE. The Soil was dank and only with Sold flexs mi | 7c1+30 Vo's 30.1-10- 7c1+30 | 10199835 | | | Sample was collected at a depth of two feet in area void of vy itation, The top one foot was a red clithe second foot was black and sandy with building debais mixed in Sample was Collected. Sample was collected was to building the sample was collected was to building the sample was collected at sundace level. The soil was dunk, and only with amounts of snavel in , |
| | Soil -13(Dup) | 10799843 | 1225-1240 | C. HolsTeom | SAMPLES WERE COPPETED AT a sunface level in an Void of vegetation, on the South Side of the SITE. The soil was dark and only with gold flexs mi |

The seven EPA fined qualifiers to be used ar a follows:

- U Indicates compound was analyzed for but not detected. The sample quantitation limit must be corrected for dilution and for percent moisture. For example, 10 U for phenol in water if the sample final volume is the protocol-specified final volume. If a I to 10 dilution of extract is necessary, the reported limit is 100 U. For a soil sample, the value must also be adjusted for percent moisture.
- I Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero. For example, if the sample quantitation limit is 10 ug/L, but a concentration of 3 ug/L is calculated, report it as 3J. The sample quantitation limit must be adjusted for both dilution and percent moisture as discussed for the U flag, so that if a sample with 24Z moisture and a 1 to 10 dilution factor has a calculated concentration of 300 ug/L and a sample quantitation limit of 430 ug/kg, report the concentration as 300J on Form I.
- C This flag applies to pesticide results where the identification has been confirmed by GC/MS. Single component pesticides >10 mg/ul in the final extract shall be confirmed by GC/MS.
- This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action. This flag must be used for a TIC as well as for a positively identified TCL compound.
- This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis. This flag will not apply to pesticides/PCBs analyzed by GC/EC methods. If one or more compounds have a response greater than full scale, the sample or extract must be diluted and re-analyzed according to the specifications in Exhibit D. All such compounds with a response greater than full scale should have the concentration flagged with an "E" on the form I for the original analysis. If the dilution of the extract causes any compounds identified in the first analysis to be below the calibration range in the second analysis, then the results of both analyses shall be reported on separate Forms I. The Form I for the diluted sample shall have the "DL" suffix appended to the sample number.
- D This flag identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor, as in the "E" flag above, the "DL" suffix is appended to the sample number on the Form I for the diluted sample, and all concentration values reported on that Form I are flagged with the "D" flag.
- A This flag indicates that a TIC is a suspected aldol-condensation product.

Under the columns labeled "C", "Q", and "N", enter result qualifiers as identified below. If additional qualifiers are used, their explicit definitions must be included on the Cover Page in the Comments section.

FORM I-IN includes fields for three types of result qualifiers. These qualifiers must be completed as follows:

- o C (Concentration) qualifier -- Enter "B" if the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL) but greater than or equal to the Instrument Detection Limit (IDL). If the analyte was analyzed for but not datected, a "U" must be entered.
- o Q qualifier -- Specified entries and their meanings are as follows:
 - E The reported value is estimated because of the presence of interference. An explanatory note must be included under Comments on the Cover Page (if the problem applies to all samples) or on the specific FORM I-IN (if it is an isolated problem).
 - M Duplicate injection practision not met.
 - N Spiked sample recovery not within control limits.
 - 5 The reported value was determined by the Hethod of Standard Additions (MSA).
 - W Fost-digestion spike for Furnace AA analysis is out of control limits (65-115t), while sample absorbance is less than 50t of spike absorbance. (See Exhibit E.)
 - * Duplicate analysis not within control limits.
 - + Correlation coefficient for the MSA is less than 0.995.

Entering "\$", "W", or "+" is mutually exclusive. No combination of these qualifiers can appear in the same field for an analyte.

- o X (Method) qualifier -- Enter:
 - · *P* for ICP
 - . "A" for Flame AA
 - "F" for Furnace AA
 - . "GV" for Manual Cold Vapor AA
 - "AV" for Automated Cold Vapor AA
 - "AB" for Semi-Automated Spectrophotometric
 - . "C" for Manual Speetrophotometric
 - Tr for Titrimetric
 - . "MR" if the analyte is not required to be analyzed.

A brief physical description of the sample, both before and after digestion, must be reported in the fields for color (before and after), clarity (before and after), texture and artifacts. For water samples, report color and clarity. For soil samples, report color, texture and artifacts.

AnalytiKEM An American NuKEM Company

AnalytiKEM Inc. 28 Springdale Road Cherry Hill. NJ 08003 609/751-1122 215/923-2068

TABLE-5

Analytical Data Report Package

for the

New Jersey Department of Environmental Protection

Division of Hazardous Waste Management

Trenton, New Jersey 08625

| Field Sample # | Laboratory Sample # | Date of Collection | |
|-------------------|---------------------|--------------------|--|
| BSA 10199841 S-8 | A20370-1 | 10/19/89 | |
| BSA 10199842 S-10 | A20370-2 | 10/19/89 | |
| BSA 10199843 S-11 | A20370-3 | 10/19/89 | |

| Laboratory Name | AnalytiKEM, Inc. |
|------------------------------|--------------------------|
| Certification # | NJ 04012 |
| Supervisor/Manager Signature | MichaelSknoohli |
| Printed Name | Michael Shmookler, Ph.D. |

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| • | 1 | | s | -8 |
|-------------------------------|--|-----------|---------------------------|---------------|
| Lab Name: AnalytiKEM | | | ·. · . | |
| Lab Code: 04012 Case No. | Contract | No.: | X-195 | · . |
| Matrix: (soil/water) Solid | • | Lab Sampl | e ID: | A20370-1 |
| Sample wt/vol: 10.17 | (g/mL) g | Date Rece | ived: _ | 10/19/89 |
| % Moisture: not dec. 15 | dec | Date Anal | yzed: | 10/28-11/1/89 |
| į ; | | Dilution | Factor | 1:5 |
| | | | | |
| į. | 1 | RESULTS | | |
| Parameter | Sample Concentration, Units: ug/kg | on ` | Method Blank Units: | |
| Petroleum Hydrocarbons, by IR | 270,000 | | 20,0 | ע 000 |

GENERAL ANALYSIS DATA SHEET

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GENERAL ANALYSIS DATA SHEET

DEP SAMPLE NO. BSA 10199842 S-10

| Lab Name: AnalytiKEM | _ | |
|-------------------------------|--|-----------------------------|
| Lab Code: 04012 Case No. | Contract No.: | x −195 |
| Matrix: (soil/water) Solid | Lab Sam | ple ID: <u>A20370-2</u> |
| Sample wt/vol: | (g/mL) g Date Re | ceived: 10/19/89 |
| % Moisture: not dec. 23 | dec Date An | alyzed: <u>10/28-11/1/8</u> |
| , | Dilutio | n Factor: 1:50 |
| | | |
| | RESULTS | i, i |
| Parameter | Sample ' Concentration Units: ug/kg dw | Blank |
| Petroleum Hydrocarbons, by IR | 4.800.000 | 20.000 U |

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DEP SAMPLE NO. GENERAL ANALYSIS DATA SHEET BSA 10199843 S-11 Lab Nauer familytikEM Lab Code: 04012 Case No. Contract No.: X-195 Matrix: (soil/water) Solid Lab Sample ID: A20370-3 10.75 (g/mL) g Date Received: 10/19/89 Sample wt/vol: % Moisture: not dec. 10 dec. Date Analyzed: 10/28-11/1/89 Dilution Factor: 1:400 RESULTS Method Sample , Concentration Blank Parameter Units: ug/kg Units: ug/kg dw Petroleum Hydrocarbons, by IR . 100,000,000 20,000 U